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The Caxton Magazine

ESTABLISHED 1899

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All Editorial Communications should be addressed to the Editor, THE CAXTON MAGAZINE, Avenue Chambers, Southampton Row, London, W.C.

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GOUDY HANDTOOLED

10 Point
MEN GRADUATE
Students from many states complete their

12 Point
INDEPENDENT
Remote little isles given opportunity

14 Point
BURLESQUE
European light opera with fine

18 Point
THE ATF!
Shortt & Co supply this.

24 Point
HOCKEY
Ice skating

30 Point
RECIPE
Nymphs

36 Point
Ensure

42 Point
Herds

72 Point
Dial

60 Point
Sight

48 Point
Epoch

GOUDY HANDTOOLED ITALIC

72 Point
Bird

60 Point
Eight

48 Point
Judges

24 Point
GNOMES
Responded

30 Point
FROND
Naughty

36 Point
Norton

42 Point
Spirits

10 Point
HUNTING HORSE
Southern equestrians display unusual skill

12 Point
SUBSCRIPTION
Notable magazine increasing number

14 Point
MODERNIZE
Improved ways of manufacture

18 Point
THE ATF!
Shortt & Co supply this.

Sole Agents for The American Type Founders Company
C. W. SHORTT & CO. LTD,
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A.T.F. 24-pt Rosa Border No. 10.

THE CAXTON MAGAZINE
A PROGRESSIVE ORGAN OF THE GRAPHIC ARTS
Edited by A. E. OWEN-JONES

George W. Jones on Traditions of the Printing Craft and their Lessons*

I THANK you for the invitation to speak to the printers of this great city and district about that important calling with which we are all associated, and to which we are devoting the greatest part of our energies and labours.

I considered it to be no mean compliment when you invited me, in your own name and that of your Association, to speak about some of the early fathers of our remarkable craft; of the story, so fascinating, so romantic, so wonderful, of triumph over what appears to us to-day to have been almost unsurmountable difficulties, of indomitable determination, and the priceless heritage not only of great tradition, but also of those glorious expressions of craftsmanship which are not only a rich mine of example, but an ever fresh inspiration to their twentieth century successors. It is now thirty years since I was first privileged, at their invitation, to speak to Manchester printers. Doubtless I then possessed more energy than I have to-day, but certainly not a greater love for our high calling. I have not forgotten the whole hearted welcome I received one Saturday afternoon from Mr. John Taylor, who I am happy to see here to-day, and a large number of really enthusiastic typographers. Since that time I have been asked to address the Printing Crafts Guild on two occasions at your College of Technology. I am therefore not quite a stranger to Manchester printers.

It has been said in my presence more than once that, in the production of much of my work, I do not let cost interfere with the result. Let me disabuse the mind of anyone here to-day who may have got that impression of my working method of following my calling as a printer. No! while I try to produce work as good as any skill, or knowledge, or taste I may possess, and the means at my disposal will enable me, I am concerned equally with every one of you in making every job contribute its due share of profit in each department.

But I am going to suggest to you that because I am a close student of the work of our earliest and greatest printers—the very mention of whose names and work must fill us with conscious pride—and if I am in some way able to revel in their great past this in no sense unfits me to grapple with the problems, the almost everyday changing problems, which confront the present day successors of the first printers. On the contrary, I must ever maintain, in the sincere hope and intention that it may lead printers to a serious contemplation of the work of their craftsman forbears, that this study, and the inspiration derived by the study, makes for more than a moral equipment with which to meet to-day's demands for work of character and beauty, as well as to meet our everyday practical difficulties.

That precept may be accompanied with practical example, I have brought with me some of the recent work of my press to emphasise, if needs be, the lessons I desire we should derive from the careful study of fifteenth and sixteenth century and later printed work.

The history of our craft—beneficial almost to the point of being—as has often been claimed for it—divine, and its traditions, make a story of absorbing interest. The men, the age, the work, the influence, is one glorious romance. It has ever been, it even is to-day, in its character at once wonderful, intriguing, tantalising, beneficent. And as it has affected its individual workers it has been a story of pathos, and failure, of prideful sacrifice, but especially of masterful achievement.

Consider for a moment the history and the work of our great master Gutenberg. Think of the years of patient endeavour, the putting to hazard of the whole of his fortune, his association with Fust, his triumph over all the difficulties of which we know absolutely nothing, but which must have been appalling; the conception of the production of the 42-line Bible, a monument alike to the wit as well as the cunning craftsmanship of the first printer; the printing of the Bible well on the way, each succeeding sheet bringing a new joy and a fresh satisfaction to the master, the inability to meet the bond held by Fust, the law suit which gave everything to the financier, and then the heartbreak of the master, when his types, his presses, and the partly printed Bible, creatures of his brain, his patience and his love, passed to Johann Fust. And we, his successors of to-day, his brother craftsmen, are the inheritors of that kingdom of service he founded in the product of the engraved punch, the matrix, and the mould, namely, the printing type. The perfection of his work is seen in the noble volume, which alone is a monument immensely greater than that the craftsmen of his country have erected to his everlasting honour at Mainz. We have our difficulties, but they sink into less than nothingness besides those of the founder of our calling. Sometimes when one is "up against it" and inclined to think that the world is coming to an end, it is a case of taking a page of that great masterpiece into one's hand, and the whole picture of achievement, sacrifice and triumph in defeat comes into view, and shame takes the place of an irritation unworthy of even a twentieth century brother printer.

I spent a glorious hour, by the kindness of the Librarian, Dr. Henry Guppy, M.A., in the John Rylands Library before coming to this luncheon.

*From an Address delivered to the Manchester and Salford Master Printers' Association.

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It is difficult to express the emotions that passed through one's breast in the presence of the noblest and loftiest expressions of our calling. It was not merely printed books, with beautiful types, wonderful illustration, press work and paper such as the world shall never surpass, it was the worship expressed in their work by men who loved their craft; the enrichment of a calling by men to whom sacrifice was a joy and service a commonplace. Hundreds of faces of types are exhibited there also, showing the endeavour of those early fellows—the prophets and lawgivers of our craft—to arrive at the perfect type, the types most suitable for the immediate purpose. How small one felt in the presence of such majesty, how proud that one was engaged in the same calling—even if so far removed both by desire and accomplishment. I went as to some shrine, some holy place. Even so, I saw in a splendid example of the work of our English Master Caxton one of the finest lessons in the arrangement and printing of woodcut and type I have ever seen. There were giants in those days!

I wonder if, when we order a fount of type from the typefounders, we give a thought to the enormous amount of work that has gone to the making of that particular fount—centuries of typecutting and design. Believe me, those early fellows possessed the knowledge of what was good and true in types. One is almost inclined to wish that, with very few exceptions, there had been no type designer after the middle of the sixteenth century. Knowledge, and purpose, and mastery, are seen all through the work of the masters whose craftsmanship finds a home in the Rylands Library. Four hundred and seventy years of tradition and service is the heritage handed to us. What an inheritance!

Think for a moment of the sack of Mainz, because two ecclesiastics desired its overlordship. The scattering of our father printers of that city—for they are our father printers, and our relation is close or distant as we possess of their spirit of love and service, and of accomplishment at all costs. Think only of two of them—for time does not permit of much reference—Conrad Sweynham and Arnold Pannartz, packing up their little stock of types, store of paper, and printing press and materials, leaving the city of their labours, crossing the Italian Alps into Italy, that uninterfered with they might carry on their work, only to discover that their Gothic types did not find favour with Italian patrons. Think of their necessity to fashion new ones, which would meet the taste of their new clients, only to find that this transition type with its part Gothic, part Roman character, must give way to another face more purely Roman. And yet how impatient are we, their successors, at having to wait an extra day for the new fount from the foundry, and how often we grudge the few shillings per pound the typefounder charges.

No printed book had been produced in Italy before the end of the year 1464, and yet in Venice alone some thousands had been produced by the end of the fifteenth century. Those early fellows had not only cut dozens of faces of types, but they had created a book buying and reading public. When these men commenced printing wealthy patrons were ready to pay great sums for the manuscript books, but by the end of the fifteenth century the printed book was within the reach of the middle and lower middle classes. It is questionable whether the Reformation could have been effected without the work of these men. Liberty must have struggled for birth years longer without their craftsmanship. Their contribution to the well-being of mankind cannot be computed by you and me.

There is one thing about the old printers which ever appeals to me, and that is, that when they did their job they put their heart and soul into it. You and I, by reason of the exigencies of present day conditions, have to content ourselves with not always doing our very best. You and I have even questioned before now whether we should put our imprint on a job or not.

Sometimes one hears uncomplimentary things said of the work of our English master, Caxton. Well, I learned a very special lesson from one of his books this morning, and I felt as a child in some great presence which was beyond my comprehension. Remember he was sixty years of age when he commenced to learn the art at Cologne, his eye dimmed, his hand unsteady, and yet he printed at least one hundred books, and did more than any of his contemporaries for English literature also. His name is worthy of our profoundest reverence. We could talk long of these great fathers of our calling—German, Italian, French, English, and others. They have left us great examples. From their work we learn the beauty of simplicity, and from the spirit in which they wrought we learn of the glory of service and of sacrifice.

Forged Orders

Some recent cases in the police courts of goods obtained by forged orders brought out the fact that these orders had been written on stolen notepaper. In this connection a correspondent wrote: "Some while ago I wrote to a printing firm inquiring for prices, etc., of billheads, and in reply received about twenty samples. Of these only a few had prices written on them, and few were defaced sufficiently to prevent an unscrupulous person from using them. As it would appear to be the custom of certain printers to print a few extra for samples when executing an order, ought they not to mutilate such samples before sending them out so as to make it impossible for them to be used?" Most printers do this, of course, but the reminder may be useful to others.

Fortieth Aniversary Dinner

In celebration of the 40th anniversary of the birthday of The Isle of Wight County Press, the directors of the company invited the staff to dinner at the Bugle Hotel, Newport, when the chairman of the company, Mr. H. Sweetman, J.P., presided with characteristic geniality, supported by the Mayor of Newport (Mr. G. F. Quinton), the Mayor of Ryde (Mr. Rowland Russell), Messrs. G. A. Brannon (managing director), Edward W. Way and T. R. Tilling (directors), George Long (secretary), Captain G. W. Brannon, M.C. (deputy manager), and Mr. W. H. Dann, B.A. (editor), the company numbering well over fifty. An excellent dinner was served by Host H. T. Read, and a thoroughly enjoyable evening was spent.

The Process Year Book

By R. B. FISHENDEN

TO the printer the present volume of The Process Year Book is, without question, the most successful that has so far been produced. The type is beautiful and uniformly printed, and sufficient ink has been used to give a satisfying richness to the pages. The paper is a toned antique with a pleasant surface. The type is one that has recently been cut by the Lanston Monotype Corporation, and is a close copy of that used by Aldus Manutius in the Hypnerotomachia Poliphili printed in the fifteenth century, and considered by many authorities to be the most exquisite of all book productions. Stanley Morison, who was responsible for the production of this series by the Lanston Monotype Corporation, contributes an article on its origin and its distinguishing characteristics, and suggests that the Poliphilus type is probably the model that Tory and Garamond adopted, and is the direct ancestor of the family that we know in England as "old face." The type is easy to read, and the capitals extremely satisfactory, although certain characters might with advantage be modified; the capital "R" with its full tail is distinctly disturbing where it occurs in run-on matter.

It may appear a little unusual to give prominence to the format of this annual; but the marked improvement that has been made in recent years will justify these remarks, and printers may selfishly express the hope that the annual will continue to give increased prominence to matters of general interest to the craft rather than to the comparatively unimportant developments of the process industry.

The binding of this issue is dignified and restrained, and perhaps in the next volume it may be found possible to dispense with the advertisements on the end papers, or, at any rate, reduce their importance so that they may conform with the general scheme of decoration.

With regard to the illustrations, whilst fully realising the extreme difficulty of exercising a sufficiently rigorous control, the subjects chosen for the most part show a steady improvement; but, unfortunately, there are still one or two examples which might with advantage have been omitted, as from the standpoint of both artist and advertiser they are decidedly unsatisfactory.

Mr. William Gamble, the editor—who, it must be admitted, is able to speak with greater authority upon the subjects under review than any other critic in this country—makes certain suggestions in his review of the year's work for the proper lines of future development, and the suggestions should be carefully read and considered by all who have the future welfare of the craft at heart. The past year can scarcely claim to mark the birth of any particular achievement in the trade, it having been more a period of consolidation than of fresh development. In speaking of technical inventions Mr. Gamble reminds us that it is not the one who discovers a new principle who is entitled to recognition; but any man who "has the prescience to see some application which has escaped the notice of others who is entitled to credit for his forethought." We are reminded of the case of Rubel, who is usually accepted as the inventor of the offset machine, although proofs on paper had frequently been offset previously on tin printing machines. The offset reproduction of books continues to increase in importance, and a number of processes have been introduced by means of which negatives may be made economically, such as the Manul process and the Typon process, neither of which require a camera. Mr. Gamble describes a German process by means of which camera negatives are made automatically, and it is claimed that thousands of pages can be reproduced daily, either enlarged or reduced. The editor also gives us a pertinent reminder that, although many of these processes may at first sight appear attractive, neither in cost nor in quality do they easily compete with the old-fashioned yet still standard process of wet collodion photography. The examples of offset printing in the present volume are a striking advance on those of last year; in every case they are produced by the photo-lithographic process.

The most interesting portion of Mr. Gamble's review deals with the future of colour work. He suggests that the public craving for colour continues to increase, and that the time has now come when the printing industry must seriously contemplate the means whereby pictures can be produced in colour at cheaper rates and at greater speeds. If we admit that the demand does exist—and who can question it?—then, no doubt, the means will be found whereby it can be fulfilled. The editor reminds us that the processes involved in three-colour block printing are fundamentally the same as those employed by the Chinese before the invention of printing. In any case we must allow that the limit of speed in high-class three-colour letterpress printing under existing conditions has been reached. In looking to the future, Mr. Gamble is strongly of the opinion that photogravure is the process that will be adopted, and his careful discussion of the means of solving the problem will be read with interest.

Letterpress printers will be encouraged by the reference to the experiments of Ronald Trist, who is still occupied on a process by means of which he expects it to be possible to print a specially prepared lithographic plate on a letterpress machine that will not require any damping. Mr. Trist says that during the past year he has made some striking improvements in his system, but was unable to give the details of these in time for publication. His process is in no way similar to the dry litho process of W. P. Price or the Wharf Litho invented by Mr. Hildyard.

To our way of thinking, the most important article in the Year Book is the one by Ernst Brinkman on Multi-Colour Intaglio Machines, although unfortunately some parts of the writer's reasoning are somewhat obscure on account of what appears to be a rather faulty translation from the original text. The practical advantages and limitations of several machines for printing colour-gravure are discussed, from the sheet-fed machine to various types of reel-fed machines, both of the calico-printing type and the fast rotary type. This important contribution to the present volume on the design and construction of gravure

machines for colour printing should be carefully studied. Other articles of particular interest to printers are those by W. Ilston Cox, H. E. W. Johnson, H Duncan Keats, who deal with inks, and John Widdop and Joseph Goodman, who deal with offset printing. A useful and slightly humorous contribution on Dry Flong Moulding is written by T. J. Kelly.

An article of special interest to photo-lithographers is contributed by G. C. Laws, on The Revival of Collodion Emulsion, and describes the means whereby it can be employed economically, and its advantages in colour reproduction in comparison with the usual dry plates.

A. E. Bawtree describes a new process that he has invented to supersede the three-colour process, which has a four-colour basis, although differing from the four-colour process of Zander, in which two pairs of complementaries were used. We must await further proofs of the practical value of this process, as the example given is by no means convincing: the colours shown in the reproduction are stated to be a close approximation to the original.

A remarkable achievement is recorded by Stephen H. Horgan in the telephoning of a portrait in colours, and the article is illustrated by a first portrait in monochrome of a telephone girl which was transmitted over the telephone wire in May, 1924, and has been engraved direct by the negative received over the wire. It is stated that the pitch of this picture is equal to sixty-five lines to the inch, and the time for transmitting the picture, $4\frac{1}{2}$ in. by $6\frac{1}{2}$ in., was only four and a half minutes. When it is realised that the negative record that is received can be printed at once on to metal and etched into a block ready for a newspaper forme, the great importance of this achievement will be realised.

C. T. Jacobi has written an article describing the work of the Daniel Press at Oxford. Printers should be interested in the work of Dr. Daniel, as he was in a measure responsible for the revival of the Fell type, and a reproduction of a title page which he produced in 1884 shows that he forestalled the modern revival in the use of flowers in ornament and decoration.

In the advertising field there are contributions from E. W. Houser and Louis Flader, and one by J. W. Haynes on The Progress of Advertising Art. Accompanying this article are some reproductions of contemporary posters, press advertisements, and booklets. Some of these have been decked out with designs in the most approved late Victorian manner, and the effect of superimposing designs of an artist like McKnight Kauffer is little short of ludicrous, and we wonder whether the author approved. Some of the best works of C. W. Hobson and the Baynard Press have also been mounted on a bad or imitation wallpaper with realistic shadows from the booklets. Is it possible that the author, the artist or the printers approve of the way these specimens have been produced.

There is also an article by R. B. Fishenden on Speeding-up Rotary Gravure.

We must be grateful to J. E. Barton for his article on The Wood-Engraved Illustrations of the 'Sixties, which is accompanied by twenty-four reproductions from original examples. Mr. Barton knows exactly the place of the wood engraving of the 'sixties, and we might hope for a revival of the art of that period to-day in a similar happy partnership between the designer and the engraver.

The illustrations cover the usual processes with one or two notable additions. As usual, the Rembrandt Intaglio Printing Company show some excellent examples of their Rembrandt prints, both in monochrome and in colour. A catalogue illustration of a Napier engine is a very fine example. Ashworth and Meredith have also entered the field of catalogue printing by the machine gravure process. Another example of colour gravure is by Ponton, of Glasgow. A colour gravure by the Heliochromie Process of Sadag, Geneva, calls for special commendation: in its texture and the perfect reproduction of the water-colour, the print shows a very high standard. In offset printing, the ink-photo process of William Brown & Co. is illustrated, and also the special offset process of the Engravers' Guild, as well as those of Johnson, Wykes & Paine, Ltd., of Leicester, and a very good reproduction of an oil painting by Geo. Gibbons & Co., of Leicester.

In three- and four-colour letterpress printing the first place must be accorded to a reproduction of an autochrome in four colours by F. Bruckmann, A.G., Munich, whilst the Arc Engraving Co., Ltd., show some excellent colour reproductions of Chinese pottery. A specimen of an Ultimatt process print by the Nickeloid Electrotype Co., Ltd., is very interesting.

In these days the line-etching process seems to be forgotten, and the line block of St. John's College, Oxford, contributed by the Marshall Engraving Co., Ltd., is worthy of the highest commendation.

Penrose's Annual, The Process Year Book, edited by Wm. Gamble, F.R.P.S., F.O.S. Vol. XXVII., 1925. Published by Percy Lund, Humphries and Co. Ltd., London. Price 8/-

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A Miniature "Cleveland"

The Canadian-American Machinery Co., Ltd., of 63, Farringdon Street, London, E.C., have just placed on the market a new crown folding machine, which is to all intents and purposes a miniature "Cleveland," having the same unique feed table. The first sale of this machine has been made to the Blackfriars Press at Leicester, whose manager saw the machine running in the firm's showrooms at Farringdon Street, and within seven days, was back again ordering the machine, and within ten days it was running at the Blackfriars Press Leicester Works. It may be mentioned that the Press have already installed a quad-crown "Cleveland," which is doing excellent work.

New Wages Demand in the Printing Trade

The New Year opens with the prospect of sharp negotiations on new demands affecting wages and hours put forward by the employes' unions. The London Society of Compositors has decided to approach the London Master Printers' Association for an increase in wages of 7s. per week, and also for a reduction of hours to 44 per week. The National Union of Paperworkers has also decided to move in the same direction, and their suggestion has been adopted by the London Printing and Kindred Trades Federation, who will forward their recommendations to the National Printing Trades Federation.

Organising Our Craft*

By Mr. W. WHYTE, (Secretary London Master Printers' Association.)

IN North London last year, Mr. Howard Hazell, referring to the oft-heard query, "What's the use of the L.M.P.A.?" said that those who complained that they paid subscriptions without getting any direct return were as sensible as people who complain of paying fire insurance and never having a fire! Except in my own borough in North London—where, as you would gather from some recent prosecutions, fire insurance without a fire to follow would be regarded as rather a "wash-out"—Mr. Hazell's reply was considered effective. Your past president (Mr. Whitehead) not so long ago gave a very spirited answer to the same question when put in an issue of THE CAXTON MAGAZINE. You will agree, therefore, that I am absolved from dealing with the general service of the L.M.P.A. to-night; nor is it necessary for me to dwell upon the splendid work being done by our Federation for all the Alliances, as my chief, the reigning London president, Mr. Langley, has only recently addressed your Association on that interesting subject. Which is just as well, for even then my topic to-night, if adequately treated, would run to a large pamphlet or a small book. You will therefore be relieved to hear that I have "scrapped" two-thirds of the notes I had jotted down for your benefit.

THE DISTRICT ASSOCIATIONS.

Speaking recently in the city, Mr. Wykes, President of our Federation, referred to the useful part played by our district associations in the organising work of such a large city as London, pointing out that they take the place here of the associations which minister to the needs of the master printers in both large and small towns in the provinces. You, who are able to realise how much these organisations have done to transfer the worries of the smaller employer in particular, from his shoulders to those of the staff at the Central Office, will cordially endorse Mr. Wykes's remarks. A heavy share of the responsibility for those vigorous —but by no means green—shoots from the parent stem is on the conscience of Mr. Langley, who took an active part in the formation of the first, the West and North-West M.P.A., in 1913, as, indeeed, he has in organising the others. Your own North London Association arose in 1916, being preceded by the East and North-East in 1915, and followed by the South-East early and the South-West (for which I claim some of the blame) late in 1917; Central Districts (via Mr. Burchell, another North London man) in 1918; and, lastly, in 1921, by the Thames Valley, which at present fully justifies its restful name!

It would be impossible to exaggerate the immense service rendered by our district associations in linking up the parishes in their areas in a common bond of sympathy and helpfulness. Be their meetings large or small, the influence for good is almost apparent, for, if the large meeting naturally generates and maintains general interest and enthusiasm, the small one usually resolves itself into a vigorous heart-to-heart talk in which all take part, sometimes with an aggressive disregard for the feelings (if any) of the Old Bailey representative, but always with the happy result of "clearing the air" by establishing the fact of common grievances, which naturally leads to a neighbourly feeling, followed usually by an increased attendance at the next district meeting, and certainly by a busy time for the telephone operators at "Central, double six, two, one," which is all to the good.

Excepting, for obvious reasons, our City branch, one of the happiest developments of the "district" idea has taken the form of missionary expeditions from the usual meeting-place to less-favoured spots, your own North London company having already this winter toured to Enfield and East Finchley, and, after a rest here to-night, moving on in the New Year at its newest to Dalston, which, in view of the sensations it regularly provides for the Sunday papers, ought to have more than a passing interest in an organisation that is linked up with the Old Bailey!

Again, those delightful social functions which have proved such a popular and invaluable form of propaganda in bringing together in happy fellowship now and again men who hitherto had looked on each other merely as rivals for the favours of a too-thrifty customer—those occasions on which the ladies are privileged to attend and prove that they are a unifying as well as a separating influence—would be of rare and futile occurrence but for the existence of a local organisation having at its call a cheerful band of skilled volunteers eager to help, as officers, officials or committee-men, in any scheme for the benefit of their brother printers.

Under the scheme of alliances adopted in 1919 the rules of the L.M.P.A. were revised to allow the district associations to represent all L.M.P.A. members in their areas and to elect their quota on the London Council—a step which has had the happiest results. Before passing to the duller items on my agenda, let me emphasise the most encouraging fact that some 200 members of the L.M.P.A. (198 to be exact) are serving now on committees of the district and parent associations—sacrificing time and convenience, at no small financial outlay, for the benefit of their fellow-craftsmen: a striking illustration of the interest aroused in and by the work being done for London.

COMBATING PRICE-CUTTING.

Although rather stony ground for the costing enthusiast, London has not been backward in taking measures to overcome the evil so painfully widespread in our industry, compared with other organised trades, of trying to obtain orders for work by the rather crude method of offering a lower price. So far as reprints are concerned, the moral effect, directly and indirectly, of what is known as the Imprint Movement has greatly exceeded expectations. The forty firms who gave support to this crusade when it started have been able to attract recruits in such numbers that the total is now about four hundred, after deducting those who became weary in well-doing and others who thought too much importance was being attached to the last three commandments. It is a humiliating reflection on the *morale* of our members that a courageous effort to establish the principle (almost self-evident) that a price agreed by a

customer with one printer for doing certain work may reasonably be regarded as a standard price for other printers, can only be referred to with bated breath and suppression of helpful details even at a meeting such as this!

TRADE SECTIONS.

Peculiar to London also was another movement in the direction of fair prices, which led to the formation of the Trade Rulers' and Vellum Binders' Section of the L.M.P.A. in 1918, followed by a Trade Litho Section in 1919, and another section comprising Copperplate Printers, Engravers, etc. All of these have their loyally-supported lists of prices, scrupulously revised from time to time to give customers the full benefit of any fall in wages or cost of materials. Their regular meetings are marked by a keen desire to uphold the interests of their own sections, coupled with an equal anxiety to do nothing likely to embarrass the letterpress and litho members of the Association.

JOBBING PRICE LIST.

To consolidate the good work of the imprint enthusiasts, an attempt was made to establish fair prices for letterpress jobbing work, and London can pride itself on the fact that the Jobbing Price List now sent out by the Costing Committee is the successor on a larger scale of a list prepared and issued some years ago by a small committee of practical jobbing printers from our district associations, which was set up by the L.M.P.A. to overcome the bad habit of giving "spot" estimates across the counter.

DEBT RECOVERY SECTION.

In June, 1920, a Debt Recovery Section was started, and has already been of much service to our members, 800 applications having been dealt with, resulting in over £4,000 being recovered at a cost of just over £100 to the members concerned.

CREDIT AND INQUIRY SECTION.

The Credit and Inquiry Section started earlier, but is now usefully harnessed to the Debt Recovery Section, the two working together very successfully, the comparisons obtained by examination of the twin records being very helpful both to inquirers opening new accounts and those seeking to recover the money they fear has been unwisely spent in supplying the needs of customers whom they were too ready to trust. Obviously, as in the case of the imprint movement, the moral effect of such an arrangement must be considerable, in addition to the direct benefits obtained by those members who have had recourse to this section.

A MOTTO FOR THE L.M.P.A.

If I were asked (which is unlikely) to suggest a slogan which would embody the aims and objects of our Association, it would be this: "Good Work; Good Wages; Good Prices." The last would go through *nem. con.*, and the first would have much support; but the second, I fear, would at best be held over, and then only because the approach of Christmas forbids more drastic action. Yet the goal we aim at can only be reached by co-operation between employers and employed, based on mutual respect and the creation of "*craft* consciousness," as against the ugly "class consciousness" now happily falling into disrepute.

Good work, rewarded by good wages, can fairly claim good prices, instead of the low standard generally followed. And by "good wages" I do *not* mean what are justly referred to as the "blackmail" rates wrung from harassed employers by ultra-militant chapels under threat of a lightning strike or other summary interruption of important work, but merely the rates agreed and recommended by our own Association, as against the low rates—menacing fair competition—obtaining in some quarters, or the equally harmful exorbitant rates paid under duress in other establishments.

In this connection it can only be regarded as most unfortunate that attempts should now be made by certain Unions to secure advances even on the high rates prevailing in London, when these, as we know, have already resulted in much business being lost by our members, with the natural result that unemployment is more rife than ever in the area covered by our Association. This at a time when our industry was looking forward to sharing in the general revival of trade so confidently anticipated.

SIX WORDS FROM ST. PAUL.

Granted that good work is produced and that honest output—and no "ca'canny"—enables you to pay good wages to your staff as you wish to do—can you obtain good prices? I believe you can, granted courage. Our offices are dominated by a cathedral bearing the name of the Great Apostle: here are six words from St. Paul to go with the six of my motto and help you to carry it through: "Quit you like men; be strong."

*An address to the North London Asscciation, Dec. 6, 1924.

Manifoldia

MANIFOLDIA, LTD., West Bromwich, celebrated its coming-of-age by inviting all the employes to a function in the beautifully equipped canteen. It was on November 2, 1903, that Mr. Josh Bailey established Manifoldia, Ltd., in a small way, and five years later the new house known as Manifoldia was erected, and ever since there have been remarkable additions to the premises, with the result that it is now one of the largest and best-equipped factories in Great Britain, with branches in London, Birmingham, Manchester, Cardiff, Wolverhampton and Leeds. They are also represented at Liverpool, Newcastle-on-Tyne, Stoke and Swansea.

The canteen had been tastefully decorated for the occasion. The directors, Mr. Josh Bailey and Mr. J. Percy Plant, were present. The first portion of the evening was devoted to a concert, and during an interval there were interesting speeches by the two directors.

Duirng the evening there were a number of interesting presentations to the directors for the adornment of the Board Room and to mark the occasion of the coming-of-age celebrations. From the head office managers came a Stourbridge cut-glass flower bowl, from the sales directors a specially designed clock, from the office and works staff four Jacobean candlesticks, and from the factory employes a massive barometer.

To those who had been with the firm from the commencement were presented fully-paid-up endowment policies, to provide pensions for their old age, and this also applies to the heads of departments. It is the firm's methods to provide for them to be able to retire on a comfortable pension at the age of 65.

Composing Machines for Lithographers

By REV. T. WALTON

[Craft Lecture arranged by the Stationers' Company and Printing Industry Technical Board, and delivered at Stationers' Hall, Friday, December 12.]

YOU may be somewhat surprised at a clergyman taking a practical interest in the printing trade. I do not want to take up your time with historical data, for doubtless you are all familiar with the origin and development of your craft, but I may be forgiven for pointing out that your craft owes a great deal to the church both in original MS.S. and in the subsequent progress of mechanical production of written matter.

For thirty years I have found printing a fascinating hobby, and useful too, for most of my time has been spent in poor parishes, where I could not afford to spend much on printing. I began with an up-to-date printing plant costing 10s. 6d., including postage, but I should not like to say how much I have spent since. Who does like to say what he spends on his hobbies? However, most of my plant is home-made, and constituted mainly of odds and ends picked up at different times.

A PARSON'S HOBBY.

For the last eight or nine years I have been working intermittently on a mechanical composing machine, or shall I say machines, and, like all inventors, I have not found the path smooth by any means, having had many ups and downs, and more downs than ups! But I have been determined to succeed, for I felt sure that the snaggs, however formidable, could be removed; that the problems, however great, could be solved; and that the prejudice, however strong, could be broken down. I know of no greater test of character than that of inventing for the printing trade, and this not only because of the high standard of efficiency required and the severe demand on the best brains, but the everlasting scowl which says: "How dare you!"

It seems to me that the trade is divided into three main sections—letterpress, or relief printing, lithographic or planographic, and letterpress-cum-litho. It is not my intention to interfere with the former at all, but to help the latter, and, if possible, to place it in such a position as to be on equal terms with letterpress in trade competition by enabling it to turn out type matter which will compare favourably with any other process. I am not trying in the least to supplant letterpress, but to supplement it. I am convinced that there is a great future before litho-offset, and it is for this that I am working. Broken-matter magazines, weekly and daily papers, illustrated circulars, etc., are rapidly on the increase. This is an age of picture: after all we are only grown-up children and still love illustrations, but there is probably another cause, perhaps the strain of modern conditions has something to do with it: we like to see at a glance what is offered for sale or amusement. We have in these days so great a struggle to make a living that we have no time to live.

THE NEW MACHINE.

My machine is a mongrel—a cross between a typewriter and the composing machine as you know it. The machine uses ordinary types, and will print from 5-point up to 72-point, and any number of faces; a type magazine can be changed in about half a minute. For solid matter the spacing is automatic according to the set of the letter, *i.e.*, it spaces for the width of the comma, the t, d, m, or any other letter. For display work, borders and ornaments, the machine has an additional bank of keys, which space from half-point to 48-point. For this class of work the operator is supplied with a card along with each type magazine, on which the characters are grouped according to set with the number of points printed above each group, *e.g.*,

2-pt.
, . : ; '

The type-selecting key and the spacing key are depressed simultaneously and the rest is automatic. The machine can be operated by motor or treadle.

For solid matter the spacing keyboard is only used for spacing between the words.

AS SIMPLE AS A TYPEWRITER.

The machine is practically foolproof, as nothing happens unless a key is depressed even when the motor is running. The spacing cams for solid matter can be supplied to suit any face of type, so that each house can retain its own style. The operator doing solid matter has nothing to think about so far as the machine is concerned any more than a typist, everything being automatic. The operator can average about 5,000 ens an hour. The matter can be printed on the page round a line-drawing or a half-tone photo pasted on the page, the latter being, of course, screened, then the whole page is photographed or vandyked down on to the zinc plate. Or the type can be photographed separately and the type negative and screened half-tone negative used in photography on the zinc. Whether transfer or photo the work rarely needs touching up, the inking and impression being so good.

There is on each type bar a small, fine threaded bolt which regulates the impression and enables the operator to print with nothing but steel behind his paper, and thus he gets a sharp, clear impression, without any embossing, and the original is suitable and efficient for either transfer or photograph, giving results equal to any letterpress impression. Ordinary paper, transfer paper, or transparent paper may be put into the machine according to the process for which the original is intended. A roll of paper can be used for column or bookwork.

Leading matter takes up a good deal of time, as most of you know, but on my machine all that is needed is to set the line spacer according to the distance required between the lines, *e.g.*, if you wanted to lead 12-point type you would set the line spacer 14-point or as desired.

JUSTIFICATION.

How do you get the lines even in length. I anticipate that question being asked. Allow me to say first that a square is not exactly a thing of beauty. You must remember that a perfectly

justified line is necessary to meet the requirements of locking up. On the old MSS. there was more freedom and fewer arbitrary rules. But at the same time I have not much difficulty in conforming to what has become a conventional method, and can do it in various ways. Most compositors set up from typewritten matter. Compose on the machine a line of the width required, copy this on the typewriter and set the stop where the line ends, and let the typist work to this stop, so that every typewritten line is equivalent to a line in the column or book, and you will find that you can judge your spacing to a fraction, which will not be noticed in ordinary work. If you are using 24-point type and intend to reduce to 12-point, still better results may be obtained, but this is not necessary. On the other hand, if you want to be absolutely "*it*," you can first print on common proof paper with uniform spacing of 2-point. There is a dial on the machine showing the points greatly enlarged, and by this you will see at a glance how many points you have left in the line, put the number in the margin, and when doing the clean proof put them in, thus getting even spacing and a full line. Or, in the first setting, when the operator comes to the last word, he can begin at the end of the line and work backward, as the spacing on the machine is the same either way of traverse of the carriage, thus the point or two over or under would be between the last two words.

CORRECTIONS.

The man who makes no mistakes makes very little else, and I wish that all mistakes could be as easily rectified as on this machine. All the operator has got to do is to make the correction on a piece of paper and paste it over the blunder.

Now let me say a few words about display work. Here, too, I think, the machine will be of great service to the trade, not only in saving time in composition, but in saving the cost of huge stocks of type. As I have mentioned, the machine will take any number of different faces of type, from the smallest to an inch in size, and the change of magazine takes only half a minute. Each magazine of type is "made ready" before leaving the works, so that whichever magazine is put into the machine the impression will be true and exact; it will make no difference if a 6-point fount precedes or follows a 72-point. I should say the letter "e" wears by having more usage than the others; a slight turn of the bolt on the type bar will "bring it up," each type having a separate adjustment. Only one of each type is required, and when these need renewing the cost is trifling. It often happens that the type on the top of the cases is constantly being used, while that underneath is rarely used; but if half be worn out, the whole has to be scrapped or a great deal of time wasted in "make ready," that cannot happen on this machine: each type is on its own.

MAGAZINES.

One cabinet will store quite a good selection of magazines, and with one or two at his side the operator has not to move from his seat, when setting advertisements or circulars, to change from one fount to another; he just lifts one out and puts another in until his handbill or other matter is finished. The type will, of course, be in series, so that, if desired, all one bill can be set in one character of type face.

With the present mechanical typesetting machine the printer is very much restricted in his choice of sizes and faces, and can only set in a straight line; but with this machine he has the full range of the type foundry and the freedom of hand setting without a lot of "tinkering." Some of you know what I mean. If you want a word on the slant or a paragraph out of square, you have often to spend a great deal of time packing with bits of lead, card, and sometimes paste, or even chewed bread, and after the greatest care when you lift the forme you get "pie" often cooked in sulphur. More than once I have longed for a layman to express my feelings. Yet we know that anything out of the ordinary attracts the eye, and what does this is a good advertisement, so the time spent is worth while.

PUT WORDS WHERE YOU LIKE.

But how much better is it when you can place your words where you want them, and have no packing or locking up to do—what a saving of time and patience. If you have a square advertisement for example, and you want a word to go from corner to corner across it in big type and to fill up the other space with small type, pencil your square to size, then draw the lines across the square far enough apart to take the size of type you are going to use, print your big word either on the sheet itself or on a separate piece of paper; if the former, turn the sheet and fill up the corners; if the latter, paste on. You will not have any type falling out! The border can be put on either direct or pasted. If you want a circle filled with matter do not go and buy an expensive brass one. Get a pen and ink, a dinner plate, saucer or cup and make your circle; put in your type as you fancy. There is also a lot of time lost sometimes with ornaments which are not on the same body as the type. Again the machine will print them just where required without any loss of time or patience. You often get a page full of rules, time sheets, etc.; these consume a great deal of time and often test the patience, as it is so easy to "pie" the type. With my method you simply first rule your lines as you want them, then put the sheet in the machine, and put in the printed matter where it is needed.

DISPLAY.

There is also another important point about display work which causes it to be more or less inartistic sometimes in spite of all the printer can do, for the fault is in the type. I mean that the type being cast on a body cannot be drawn in unless, as is sometimes done with wood letter, and occasionally with metal type, they are mortised. Take the word "Taylor," for instance; in some founts the first half of the word is very open and the second half very close. With the machine under discussion you can draw the A under the T and the Y over the A, which makes the letters appear a uniform width apart.

By switching over a small lever the machine spaces from right to left for Arabic and other Eastern languages.

The machine has double automatic inking, so that the type is well inked even for transfer work, as the rollers cover the whole magazine, and unless letters come together they are inked over and over again.

The machine is substantially built, having no small weak parts which are liable to get out of order.

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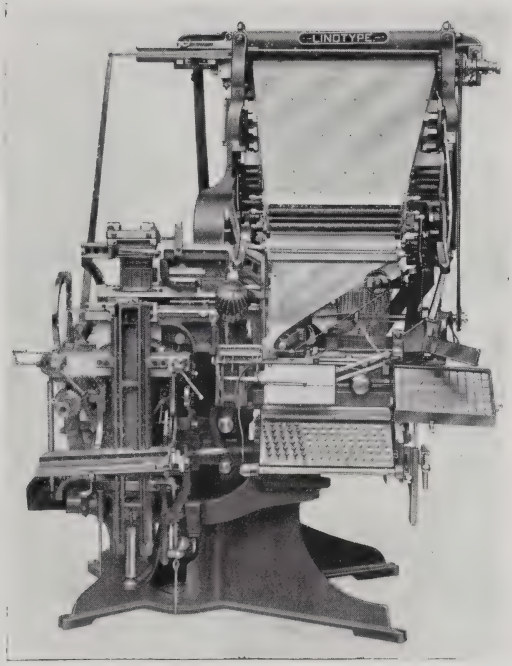

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ECONOMIES.

It would probably surprise even many men in the trade if they knew how much capital printers have to keep tied up in type and other material, which sometimes lies idle for years, but may be wanted at any moment. Workmen waste a great deal of time and energy carrying heavy cases about, and, if rumour be correct, sometimes drop them. Instead of spending their time productively and with little fatigue, their tools and methods are such as to satisfy neither master nor man.

The saving in blocks will be no small item to the printer, but it will appeal still more to the customer, who will get what he wants so much cheaper that he will not hesitate to place his orders.

The saving of space will appeal to many in London and our provincial cities and towns, where it is so valuable. But, as I have already said, space in this case not only means more rent but loss of time and energy in carrying things about and seeking for type sorts.

NO STORAGE OF FORMES.

If what I am putting before you be adopted, there will be no storing of formes, stereos, or blocks, but simply the original or negative.

It will be noticed that the printer goes direct from this composing machine to the rotary press without any expensive stereotyping plant. It is admitted that the flatbed machine is not only very much slower but more expensive to run.

I was going to confine this lecture to the machine I have already mentioned, but your principal wished me to describe my other patents as well. I said your principal—perhaps I ought to have said our principal—for although I am his vicar when he is at the school, I am also his pupil when I visit the school; and, like the rest of you, I dare not disobey his commands. If I did—well—you know! I remember, many years ago, when I was in the North, there were several men employed in a big butcher's shop, and they used to ballot for their holidays. There was one big burly chap among them who always had his holiday in July or August, and was asked if he squared the man with the hat. "Noa, lad, I doan't," he replied; "as a matter of fact ah'd bad luck this time, but ah offered to swop wi' th' little fellow who drew Bank Holiday week, and when ah put mi fist in his face to show him ah wor in earnest, he varry kindly consented." So when your principal, or our principal, is in earnest we readily consent.

CHINESE COMPOSITION.

First let me say a few words about my Chinese composing machine. Some would say: "Why bother about the Chinese? Have you not heard about the new script?" I have seen it, too. But here, in the West, you know how closely language, patriotism and nationality are allied, how nations cling to and fight for their mother tongue. This is intensified a thousand-fold in the East, and especially in China, with her long and marvellous history which is embedded in her beautiful picture language. Is it at all likely that she will be willing to make such a sacrifice as is involved in giving up not only the proofs of her historical greatness and past achievements, but her folk lore and her traditions? I do not think so; and this view is shared by missionaries and ambassadors with whom I have had long conversations

Education is rapidly spreading in the far East as well as in other parts of the world, and its progress would be very much more rapid if printing were quicker and cheaper. I claim that my machine will enable the Chinese to compose book and newspaper work, and even display work, as quickly as those using the roman characters. You will remember that in this instance you are doing a word every stroke of the key. The chief, and what has been looked upon as the insoluble problem, is the large number of characters.

SPEED.

With a machine three feet by two feet I can get 6,500 on the machine for book or newspaper work. This is no shift key, nor anything to worry the operator; everything is automatic, as on the other machine; but in this case there is no changing of magazine. The characters are displayed as large and as clearly on the keyboard as on any other composing machine.

There are two banks of keys, as on the other machine: one is for the 214 radicals or root words, and the other for their branches. For instance, you want something made of wood, you put down the proper radical key and there suddenly appears on all the upper bank of keys things made of wood, out of which you can make your choice. Put down the key for desk and it will be immediately printed on the sheet. How? It is a Chinese puzzle!

The display model is somewhat different in design to the solid matter, and, obviously, I cannot get as many different sizes as on my English machine, but I may manage 24, 36, 48, and 72 points. And perhaps John Chinaman may not be so difficult to satisfy as the Western printer.

The work done by this machine is also for litho and photo-litho-offset. Many words and lines would be written as they are now, and could be transferred or photographed with the other matter.

A NEW INK DISTRIBUTOR.

My third patent is for a companion to my composing machine, and is a small litho offset machine which will thoroughly break up the ink without a pyramid of rollers, which cause more or less friction and wear away the matter or image on the plate. It seems to me that the chief difficulty in getting good results with speed on a small machine lies in getting a good distribution of ink. Although I only use three inking rollers, two distributions, and one oscilator, and one oscilator for damping, I claim to get such a fine inking as to give the best work. I have reversed the usual practice, using the flywheel drum for inking and damping, and a small forme cylinder, which picks up the ink distributed on the drum, having eight or more contracts which is equal to eight rollers actually on the forme. By this method the forme is not injured by friction, and should last for any number of runs. The cylinder simply rolls with the drum, registering at each revolution. The drum is covered for nearly two-thirds of its surface with rubber or other substance, which is inked, about fifteen inches being occupied with the printing bed and divisions and the rest with a damping blanket. The paper feed is according to common practice. Printing takes place at each revolution of the drum on the bed which receives the offset. The power needed to drive it will be about the same as the composing machine—$\frac{1}{4}$ h.p.

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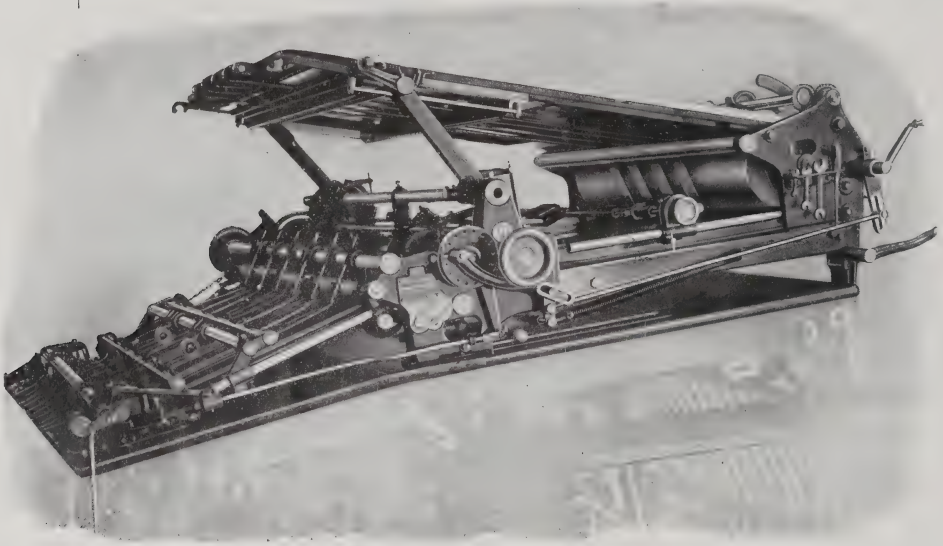

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MR. WILLIAM GAMBLE'S OPINION.

Mr. William Gamble, who presided over this lecture, said he had no doubt that Mr. Walton had approached this subject in a very careful manner and studied the problems in a way which showed that he had a very intelligent conception of what the printing trade required. His idea was that a need existed to-day, and might be a more pressing need in the immediate future, for providing a means of producing type copy for the offset photogravure printers. He had already made one machine which had been admitted as a marvel of ingenuity. Its only defect in the eyes of practical men who had seen it was that it was too slow. He had therefore designed a new machine which would remedy that defect and possess some additional advantages. They must not find fault, as inventors wanted to be constantly improving on their ideas. Every great invention was the result of many failings. That had been so especially in the case of composing machines. This invention of Mr. Walton's was the basis of a great idea. There was a field for such machines without displacing such machines as the monotype, linotype, intertype, and others, because it would serve the needs of growing industries which had no need for such machines, but which did require some handier means of preparing text than having it handset. Of course, it could not be disguised that the success of such a machine as this and similar machines which had been invented might have the effect ultimately of diminishing typesetting, but it was not Mr. Walton's idea to compete with the present type composing machine. All he wished to do was to provide lithographers or photogravure printers, who had no such machines and no facilities for typesetting, with a means of producing text or display setting instead of drawing it by hand or having it set up by the outside printer. It might well be that such a machine would find its own field of usefulness without materially affecting present typesetting machines. It could only affect them if it were found that offset and photogravure printing was better and cheaper than letterpress machines, by saving a good deal of work in make-ready, etc. The difficulty of many inventors, in fact the tragedy of the history of inventors, was the lack of necessary financial backing. Invariably inventors were poor and had to work out their ideas often by depriving themselves of the necessities of life. They were told by those whose support and encouragement was sought that when the invention was perfected it would find a market; but how could the inventor perfect his idea without help, and even when he had submitted his invention to the manufacturer the delays and difficulties were almost heartbreaking. Whenever he (the speaker) went into the Patent Office Library and saw the rows of specifications, he thought of the toil and anxiety they represented, and what great hopes were built on them, and of dreams that never came true. He wished it could be arranged that the Patent Office could be made to use some of its surplus revenue in helping the inventors, perhaps in remitting their fees, but probably that was too much to hope for, and private enterprise must be looked to to see that no really good invention was ever lost.

So far as the printing trade was concerned, when they considered what it owes to inventive minds, and what a colossal industry it had become, it might well be suggested to some of the Fleet Street millionaires that they owed much of their success to many a poor inventor who had done his part to help on the perfecting of these mechanical facilities which had made it possible for millions to be made. Could they not be asked to devote a very small part of their gains to assist such a man as the lecturer to develop an invention which might have a profound influence on the future of the printing industry. Those present could not do much, if anything, to help Mr. Walton in a monetary sense, but they could at least give him some word of encouragement and applaud his efforts to do something for the printing trade, and to carry out an idea which, when perfected, might be of immense usefulness to the trade.

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The Shoe Trades Journal

We understand that The Shoe Trades Journal, published by Messrs. Hodder & Stoughton from their Midland branch at Leicester, will in future be printed by The Blackfriars Press, of 17-23, Albion Street, who have been successful in securing the new contract.

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The Art of the Overseer

By ZINCOLEUM

THE selection of a competent overseer is a most difficult problem. He must be a man of many virtues and few frailties; a good craftsman himself, he must be able to demand respect from those under him; he must study the interests of his employers and be capable of efficient organisation.

It would seem that such a collection of good qualities could scarcely be found in one individual, and yet there are scores, and even hundreds, of men who are filling such positions with credit.

The knowledge that is required of the overseer is much wider than that which will serve the worker at the bench; he should have at least a limited acquaintance with every branch of his trade, whilst it is almost imperative that he should have an even greater knowledge than those that are connected with the process that he controls. On the commercial side, too, he requires special training. In a modern office he must not only be capable of estimating accurately, but he must understand the principles as well as the working of the costing system that is in force.

The apparently obvious thing for an employer to do when appointing an overseer is to take a man from the bench, and place him in charge; but this is sometimes a dangerous experiment, and is scarcely fair to the man himself. Some men with ambition who thus rise from the ranks are tried and found wanting, whilst others by their own merit and sheer perseverance are able to maintain the responsibilities of their new posts successfully. What is sometimes described as the overseer's "habit of mind" is a thing not acquired in a day, and it requires more than an average amount of strength of character, and perhaps personal magnetism, to enable a man who has worked by the side of his fellow workmen probably for years, to change in a day and take the standpoint of the employer as distinct from that of the employe. This does not mean that the workers are opposed to the best interests of the firm who employ them, but there is a perfectly definite though subtle change in the mode of thought that is required on the part of the one who is to control and organise the work of others. It is far better if there is a young man of promise whom an employer desires to raise to a post of responsibility, that the man should for a period—if only a few months—leave his present job and take a post elsewhere; so that when he returns to his promoted position, he will come back, not only with a broadened outlook, but also after a necessary break in personal contact with those whom he is to control.

A good man who has had some experience of the class of work of any particular shop will probably attain greater success, provided he possesses organising ability than one who has gained his experience in a position where the conditions are entirely different; but the really successful overseer who has a sufficiently wide outlook will quickly be able to adjust himself to the class of work and the customs of the firm who employ him, and thus gain the confidence not only of his master, but, if he exercises tact, that of his men as well. The workers will respect him if they find that he knows his job and can tackle any branch of the work when practical difficulties arise, and show how they should be overcome. The man who is deficient in actual practical knowledge will quickly be found out by the men, and his prospects of securing a satisfactory output will be small indeed.

The newly-appointed overseer has a difficult task. If the shop happens to be in a state of efficiency, he will require the active help of those under him in the initial stages if the output is to remain at its high level; but if it has been badly conducted, the position will be even more difficult. The "new broom" that arrives and immediately starts to sweep things up before he becomes familiar with the particular circumstances of the case, is like to make many mistakes. It is far better and safer to "sit tight" for a few weeks and take stock of the system and the kind of work that is being done, and of the men; he will then be able to formulate his plans for the future, and act accordingly.

His first job will be to test his deputy and endeavour to gain his confidence. If he can make his deputy feel that he depends upon his co-operation, and that he is actually sharing the responsibilities of the job, it will go a long way towards obtaining successful results. He will be showing his chief assistant that he has faith in his abilities, and he will find such faith will not be misplaced.

There is perhaps nothing so striking in the organisation of a printing office as the smooth running of a newspaper plant. The manager, the overseers, the deputies, and the clickers, all have their appointed tasks, and each one carries the full weight of responsibility that is allocated to him. Each must be capable of acting promptly and efficiently when emergencies arrive. We do not hear of editions being late, neither do we hear of the almost superhuman difficulties that have occasionally to be surmounted when something unforeseen occurs! As an example of perfect organisation and active responsibility, the newspaper office probably cannot be excelled.

The conditions in a lithographic shop are obviously vastly different from those in a newspaper office; but the same sort of problems arise and have to be faced, and every lithographer knows that things will sometimes go wrong, and it is the man who can surmount difficulties, and never know when he is beaten, who will push ahead and prove his worth. Men who are of a highly-strung or nervous disposition quickly wear themselves out in positions of responsibility: worry kills, and the man who has had to get out a succession of rush jobs during the day, and who can still plan his work for to-morrow with an easy mind, and then go home to sleep the sleep of the just, is the one who possesses the best kind of temperament for the overseer's job.

Printers' Managers and Overseers' Association

THE following officers were appointed for the year at the annual meeting: Mr. R. H. Berry, president; Mr. A. H. Wilson, vice-president; Mr. C. Durston, treasurer; Mr. E. W. Whittle, general secretary; Mr. W. H. Gill, financial secretary; and Mr. A. E. Jarvis, technical secretary. The membership now stands at 769.

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Printing Schools in the United States

By B. N. FRYER

IT is estimated that there are three thousand schools in the United States with printing plants. All of them, however, are not teaching the trade of printing. They range under different classifications according to intent. Beneath the intent is a secondary, yet important, consequence, of which more anon.

High on the list stands Carnegie Institute, Pittsburg, Pa., where a B.S. degree is attainable upon a four-year course. Some beautiful printing is done in the fine printing department by selected honour or "A" men, the typography being especially excellent. The objective, however, is executive training.

The most highly rated practical school is undoubtedly that of the United Typothetæ (master printers) of America at Indianapolis, where the complete course extends over four years. Composition, hand and machine (18 linotypes, one intertype, 8 monotypes), presswork, jobbing and cylinder, with automatic attachment instruction, design and layout work, costing, and estimating, are all on the curriculum. This school aims to train first-class workmen, and also has short or unit courses whereby printers may round out already-acquired experience. In conjunction there is a vocational department which provides means for entrance into the trade to boys from the neighbouring high school.

Another type of school, like Wentworth Institute, Boston, is carried on much in the same manner as the technical schools of Europe. Entrance fees are charged, and boys begin at about 14 years of age to learn that branch of the printing industry they desire to follow. Schools of this class have a high and well-deserved reputation for trade instruction.

Owing to shortage of machine compositors, both the master printers and the typographical unions are establishing schools in which operating is stressed. The master printers' schools, in Spokane, Wash.; Dallas, Texas; Macon, Ga., and Nashville, Tenn., hold a thirteen weeks' course, and the co-operation of masters is given for follow-on work when a student leaves the school for a job. The union school will take only printers for a machine course, and a severely practical test must be passed before an operator is permitted to take up work outside.

There are other good all-round printing schools, as the master printers' schools at Ithaca, N.Y., and Baltimore, Ma., while the International Typographical Union has been long established with classes in New York City, and conducts an extensive and thorough correspondence course.

The vocational schools inspired by the Federal Government, as substitute for the apprenticeship system, are, however, becoming the popular trade-training institutions. They are being established throughout the States as part of the high school system to accommodate students who have leanings and aptitudes that do not reconcile with academic work. The school age is rising, and, as it is compulsory in several States for children to attend school after 14 years of age, in some until 18, the vocational school is designed to take those of practical bent. Half of each day is spent on shop work and half on the English, drawing, science, and history related to the trade. A four-years' course usually gives a youth a two-years' apprenticeship standing.

Printing departments in vocational schools ordinarily put the student through elementary and advanced composition and elementary and advanced presswork, until his last year, when he will be specialising ready to go out, and possibly will be on machine composition or on cylinder presswork and automatic feeders.

Provision is made so that in certain circumstances a student may leave the vocational school to go to work at 16 years of age, in which case he is bound to return to school for certain hours weekly. This forms what is known as the part-time school, and endeavour is made to buttress the boy's shop problems with underlying principles.

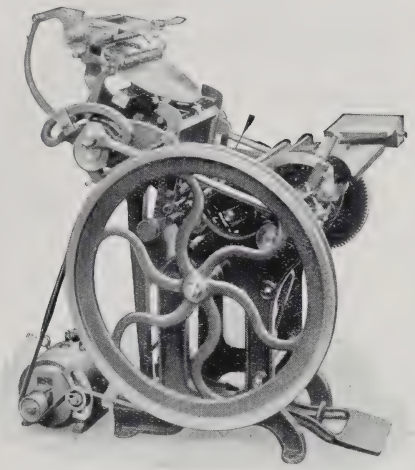
Evening classes with extension courses for adult printers are often run in these schools. Short unit courses are the rule, so that a printer may choose his need and finish attending when he has achieved his aim.

A development of the vocational high school is the junior high school, in which pupils between 12 and 14 years of age try several lines to find what they want to follow. Printing equipment in these is necessarily confined to type and small jobbing presses, and the work is supposed to be elementary.

Many manual training schools have printing plants, and in these printing is used only as an aid to general education. But a very small percentage of these scholars ever follow printing. They are, though, learning the uses and possibilities of printing; if properly directed, developing a taste for good printing; and forming a habit of speaking through the printed word: in short, a printers' clientele is in the making.

All these three thousand printing plants are naturally turning out much printing. Most of it has been created by school activities in journalism classes and their school papers—weeklies, monthlies and annuals; many other jobs would never be done did not a printing office exist in the school. Doubtless a few school forms and odd jobs are lost to the local printer, but just as doubtless he gets it in another form through the school-evolved clientele. The writer knows a case in point: A printers' supply man fell foul of a small town printer because, having equipped the local school, he had deprived the Caxtonian of work amounting to about £50 a year. The supply man got information later that the town's leading banker had given the printer work to the value of over £600 in two years, the banker declaring that his two children had led him into an advertising campaign that, if he had only known how to go about it twenty years earlier, would have seen him with banks all over the country. This was an unsolicited testimonial, as it were, entirely unsought and not even given as such, but only detected by the quick wit of the salesman, who afterwards became a printing teacher.

The United Typothetæ of America are giving support to the vocational school movement, where it "is properly conceived and properly carried out," and seek to direct it by co-operation and counsel, in



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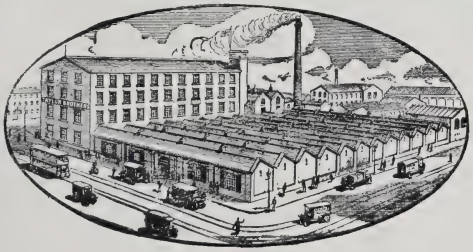

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which endeavour the officials of the Typographical Union express concurrence. The qualifications of teachers, the selection of students, the courses of study, and the equipment of the office and provision of classes of work and how it is done, are objects of concern to the whole industry, while education authorities recognise that they must draw on the experience of representative men in the trade and keep in touch with it and its requirements. The whole enterprise is of recent origin, having been launched in 1917, and is therefore still in the throes of development.

Answers to Every-day Queries of Young Compositors

By G. A. SAYERS (Concernig Plurals).

MANY and perplexing are the queries that arise in the minds of the really thoughtful and wide-awake young compositor while engaged from time to time in his most interesting and enlightening of occupations. That many of such queries should associate themselves around " words " is but a natural corollary to the nature of his calling, since a compositor's primary business is, through the medium of typefaces, the skilful and judicious handling of words, or the passing on of the pearls of thought (or otherwise) that the copy he is handling has to convey by their use. Happy the youth who early in his career becomes interested in, or enamoured with, the " study " of words; who *digs into* the derivation while seeking to know the superficial meaning of same, for such a one has entered not only the portals of the realm of thought wherein are secreted vital " aids to expression in display," but has become the possessor of the vade mecum of educational efficiency.

With a desire to render some little service to young compositors, more especially, a phase (that relating to plurals) wherein perplexing queries frequently arise is briefly dealt with in the following:

GENERAL RULES FOR THE FORMATION OF PLURALS.

1. The plurals of English nouns are regularly formed by adding *s* or *es* to the singular: as, arm, arms; bee, bees; boy, boys.

2. The distinction between *s* and *es* is governed by euphony, and the following can be safely followed:—

(*a*) Add an *s* to a singular noun when it ends with a sound that unites with *s* or *z*: as, ape, apes; block, blocks; cow, cows, etc.

(*b*) Add *es* to form an additional syllable to a noun that will not unite with the sound of an *s* or *z*, unless it ends with an *e*, when add *s*: as, cross, crosses; edge, edges.

3. The variations and exceptions are determined as follows:—

(*a*) Add *s* when a noun ends in *o* preceded by a vowel: as, bamboo, bamboos; cameo, cameos; folio, folios.

(*b*) Add *es* when a noun ends in *o* preceded by a consonant, without making an additional syllable: as, cargo, cargoes; negro, negroes; potato, potatoes. Also when preceded by a consonant and it makes another syllable, as, hiss, hisses; kiss, kisses; sash, sashes. A few, not fully Anglicized, however, take the *s* only: as, banjo, banjos; canto, cantos; solo, solos; zero, zeros.

(*c*) Add *s* to nouns ending in *y* when preceded by a vowel: as, alley, alleys; buoy, buoys; valley, valleys.

(*d*) Add *es* to nouns ending in *y*, and change the *y* into *ie* and add *s*, when preceded by a consonant: as berry, berries; dairy, dairies; enemy, enemies; lady, ladies. The word money, however, may take either of two forms—moneys, or monies.

4. The plurals of Anglo-Saxon nouns retain a form very different from the singular, often changing the chief vowel sound from one that is broad or open to one that is close or narrower: as, child, children; foot, feet; goose, geese; louse, lice; mouse, mice; ox, oxen; tooth, teeth.

5. In some cases nouns possess two forms in the plural; as, brother, brethren (more especially a spiritual term); brother, brothers (an ordinary or a family term); die, dies: but dice for the marked cubes for games; penny, pennies (for coins by number), but pence for amount of value.

6. A few nouns retain the singular unchanged in the plural: as, deer, hose, perch, sheep, vermin.

7. Most nouns ending in *f* or *fe* form the plural by adding *s*: as, belief, beliefs; chief, chiefs; strife, strifes. Add *es*, however, changing the *f* into *v* without adding to the syllables in the following: beef, beeves; calf, calves; elf, elves; half, halves; and all words of a similar character.

8. Words of a foreign derivation usually retain the plural form peculiar to the language from whence they are derived.

9. Plurals of compounds are usually formed by adding *s* to the complete word: as, armful, armfuls; cupful, cupfuls; football, footballs.

10. The first element of a compound composed of two nouns, even though it may refer to a whole class of things, is never pluralized: as, bookkeeper, fox-hunter, hair-brush.

11. If the last element of the compound forms its plural irregularly, the same form usually appears in the plural of the compound: as, footman, footmen. Nouns that end in man, but which are not compounds, form the plural by adding *s*, as, German, Germans; Mussulman, Mussulmans.

12. Compounds in which the principal word forms the first element change that element to form the plural: as, father-in-law, fathers-in-law; son-in-law, sons-in-law; court-martial, courts-martial; but major-generals, five-per-cents., etc.

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NEW District Committees of the Joint Industrial Council have been formed at Wrexham and Portsmouth.

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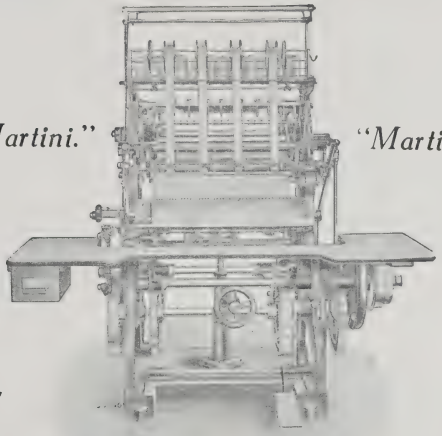

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CRAFTSMAN'S CORNER

Devoted to plain, homely talks about Letterpress Printing. Design, layout, type, composition, illustration, paper and ink will all receive attention as occasion demands; and Specimens sent in for Review which contain features of special merit or interest will be reproduced in these columns.

CONDUCTED BY H. B. NAYLOR.

THE Association of Master Printers of West and North-West London are to be congratulated on the success of their second annual Exhibition of Printing, held at the Westbourne Park Institute on November 28 and 29 last. There was also a Specimen Exchange, subscribed to by district members, which greatly advanced the importance of the occasion. Another happy side to this event included competitions for composing and presswork amongst their employes; and their employes were likewise invited along both evenings, with refreshments for all.

This get-together spirit between employer and employed is to be highly commended—anything that helps to create a better understanding must make for betterment of craft. Under such circumstances the employers were naturally proud of the productions of their offices; whilst I have good reason to know that the employes, on their side, were proud of the work they produced, and were ever ready—and only too delighted—for an opportunity to have a chat with the willing visitor about the difficulties of their work and the way in which they were overcome, resulting in what was really and truly a very fine and representative collection of work.

Anyone who knows the duties of a secretary will understand the vast amount of work an exhibition—even of small dimensions—entails, particularly from the point of view of organisation; and it would be neither fair nor desirable to particularise here just how much or how little was done by anyone to bring the event to a successful issue. Sufficient to record now that the organisers struck the right note when they made it possible for their employes to participate in such a manner that their efforts would materially help to make or mar the occasion. Both sides rose well to the occasion, and consequently each appreciates the other in truer worth.

It will probably be gathered from these remarks that I was a privileged visitor on both the before-mentioned evenings; and I do not believe anyone enjoyed themselves more than I did. One can always learn such a lot in a pleasant and easy way when printer meets printer in friendly technical discourse, and some of the impressions and thoughts which I still retain may be worth broadcasting here.

The subject of typographical display was linked up with design in printing. This does not mean irresponsible or capricious originality, a desire to make each piece of printing different from the rest; rather does it represent a preconceived order, a natural growth, a building-up process where fitness for purpose in type, paper, ink and colours is expressed in a convincing way and produces one harmonious whole.

The purpose for which a piece of printing is to be used, the message it conveys, the price which reason dictates should be paid for such work—and, shall I add, the Costing System, which helps to differentiate between good paying and wasteful work—all these are concerned in design in printing.

Printing, as a commercial proposition, is a medium for conveying thoughts and ideas between two parties, and is not intended merely as "a thing of beauty and a joy for ever." Beauty, in its fullest sense, may sometimes have to be sacrificed, in part at any rate, because it will not easily lend itself to the specific purpose of impressing certain commercial propositions on the minds of people with money to spend—ugliness even may score points occasionally. But beautiful things *are* essential to happiness in this world, however humble may be the tasks and aspirations of some folks; and therefore he who produces beautiful printing as a commercial proposition is not only an asset to his profession, but to the world at large.

What constitutes beautiful printing? From the commercial standpoint it may be expressed as a keen appreciation and understanding of the principles upon which all art is based, translated typographically into a true sense of proportion and arrangement of matter, suitability of type face or lettering to illustration and illustration to subject, appropriate decoration, careful composition and presswork, and so on; so that although the recipient may not actually appreciate it as a piece of beautiful printing, yet pleasure may be subconsciously produced whilst the message is conveyed through the printed word.

Salesmanship by the printed word has come into popular use during the twentieth century to a far greater extent than many of us realise. And it is in the construction of these business getters that one is sometimes apt to slip by the way. The story goes that a certain fire insurance company had been receiving far more claims over a certain period than was thought they should have had; so they threw out a very delicate hint to their many clients in the following style:—

"Another large house in B——r was recently destroyed by fire, caused by soot in the chimney. Why risk the lives of *your* dear ones through neglect and carelessness? Have them overhauled, cleaned, and repaired at once." (!!!)

The Specimen Exchange of the A.M.P.W. and N.W.L. consisted of a bound-up collection of work produced in the ordinary course of business in the district, and contained many examples of fine printing. It is not possible to detail them all here, and to pick out one or two would be an injustice to others; but in view of the collective advertising campaign launched by the L.M.P.A., it was very pleasing to notice that some of the contributors took their own medicine—they upheld their belief in the power of advertising by contributing some of their house literature. There was some excellent two- and three-colour work, suite stationery, catalogue and cinema printing, and general jobbing work. By its wide range one was reminded of the International Specimen Exchange (now unfortunately defunct), only not quite so voluminous in extent. Then there was a really first-class collection of large and small work (including bookwork) on the walls and on tables all round the hall, containing innumerable hints and wrinkles for the student, truly an eye-opener to those whose previous acquaintance with the local printer was limited.

In my opening paragraph I referred to some competitions which were held in conjunction with this Exhibition; and as the honour of acting as judge was conferred on me, it may be interesting and helpful to printers in many parts if I devote the rest of this article to reproductions of some of the winning designs, with running comments thereon

In competition work some of the difficulties with which a judge has to contend are also the difficulties which many competitors come up against in their local surroundings. There may not be enough of a certain series of type, border, or rule; the type they would prefer to use is not in the office; it may be very difficult to obtain the desired kind and colour of paper, card or ink; where prizes are awarded separately for composing and presswork, as in these competitions, the chum with whom one works hand in hand may hold different views. These, and many other factors, have an influence on the final result, and will frequently place a competitor at a disadvantage, much to the discomfiture of the judge also. Competition work is not a strictly commercial proposition. More time is given to detail, material is possibly obtained that is not kept in the house. Happy indeed is the man who can turn out such work as if it were merely an item that was to appear on his docket, produced in the ordinary course of routine. Lucky is the employer who possesses such a man!

Now for a brief examination of the work of some of the prize winners. It is obvious that only typographical display can be taken into account here—in the actual competitions prizes for composing *and* presswork were awarded.

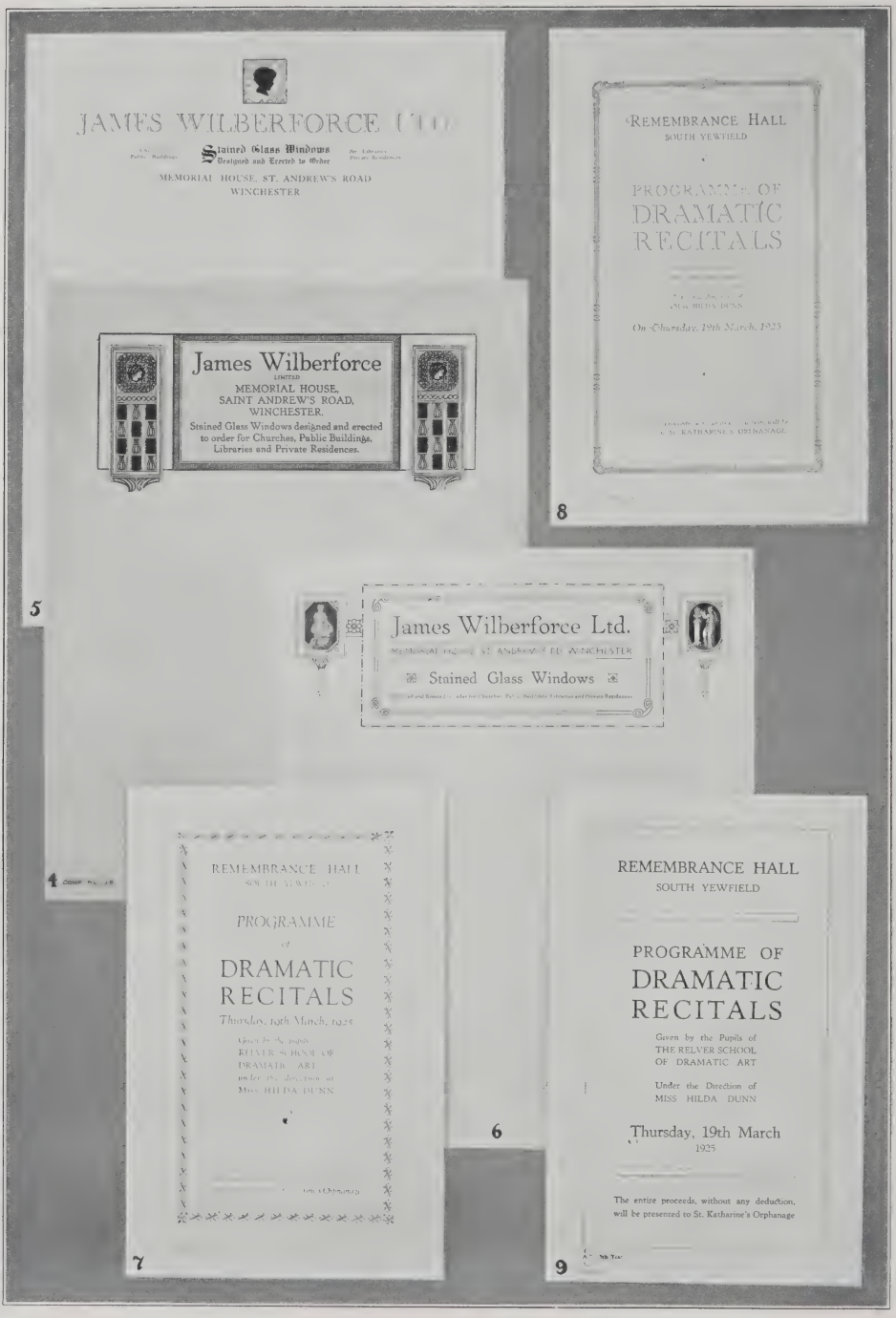
Examples 1, 2 and 3 represent a large business card, design being confined to one colour, the winners here being shown in their numerical order.

Example 1 is set in Goudy Old Style roman and italic. Surrounding the central group of wording is a 3-point blind border (slightly "greyed" here to indicate position) which performs the very useful purpose of breaking up the white space between the three groups of wording. The italic line at head makes the job. Word and letter-spacing is rather wide, but apparently unavoidable under this treatment.

Example 2 is set entirely in Westminster Old Style. This is a very chaste design, the lettering being very suitable to the treatment given; it would have been improved by having a double line instead of a single line border round, and by omitting the points at end of lines.

Example 3 is set in Goudy Old Style and Abbey Text. Quite effective, but split up into too many groups. In arranging the four corner pieces of wording, the bottom right hand corner group is rather unkind to the jeweller—the designer inadvertently arranged for the words "diamonds—cut glass" to come together.

This competition was confined to apprentices only.


JAMES WILBERFORCE LTD
Stained Glass Windows
Designed and Erected to Order
MEMORIAL HOUSE, ST. ANDREW'S ROAD
WINCHESTER
James Wilberforce
LIMITED
MEMORIAL HOUSE,
SAINT ANDREW'S ROAD,
WINCHESTER.
Stained Glass Windows designed and erected to order for Churches, Public Buildings, Libraries and Private Residences.
REMEMBRANCE HALL
SOUTH YEWFIELD
PROGRAMME OF
DRAMATIC
RECITALS
On Thursday, 19th March, 1925
James Wilberforce Ltd.
Stained Glass Windows
REMEMBRANCE HALL
PROGRAMME
of
DRAMATIC
RECITALS
Thursday, 19th March, 1925
REMEMBRANCE HALL
SOUTH YEWFIELD
PROGRAMME OF
DRAMATIC
RECITALS
Given by the Pupils of
THE RELVER SCHOOL
OF DRAMATIC ART
Under the Direction of
MISS HILDA DUNN
Thursday, 19th March
1925
The entire proceeds, without any deduction, will be presented to St. Katharine's Orphanage
1
2
3
4
5
6
7
8
9

For reproduction purposes only two competitions have been grouped together—letter headings and programme titles—the winners (journeymen only) being numbered 4, 5 and 6 for the letter headings, Examples 7, 8 and 9 for the programme titles (apprentices only).

Letters play such an important part in the business world to-day that perhaps a few words concerning them generally, before dealing with the designs in particular, may not be out of place.

Letter headings serve a two-fold purpose: to direct attention to the name and address of sender and to advertise his business; and much will depend on the use to which it is to be put and the nature of the design in settling the cost and style. So far as this competition is concerned it is undoubtedly an advertisement as well as a notice.

Unlike a poster, that addresses anyone whom it may or may not concern, a letter is addressed to the individual, who will presumably study, or at any rate read its contents sitting at ease at a desk or some other convenient place. So greater restraint is generally used in this than applies to many other forms of advertising, the nature of the business receiving due consideration in the planning out.

In our zeal to do our best for a customer we are sometimes apt to overstep the mark in the question of depth of heading—it should never go below a quarter of the way down the paper. I am referring now to quarto note. When a quarter of the length is used, by the time some allowance is made for space under the heading, the letter proper is allowed barely two-thirds of the quarto sheet. The more room you can give within reason to the letter as a whole, the more interesting will it look. Those who dictate the letters want to have *their* say as well, so the less you make it necessary for them to crowd up against your heading, in just the same way will your efforts receive greater prominence—and so will the advertisement. It may be argued, Why not use a continuation sheet and avoid overcrowding? Because, in the ordinary way, a single leaf letter in business is better.

Examples 4, 5 and 6 are the first three prize winners for a two-colour large post quarto letter heading suitable for stained glass window designers, and many competitors tried to feature this with the ordinary material at their disposal with a fair degree of success.

Example 4 is set entirely in Chippendale, and printed in blue and red on Blandford Bond. The two side panels have been cleverly featured to suggest stained glass windows with ordinary material that will be found in most printing offices—it is only in these panels that the second colour (red) has been used, all the wording and panel surrounding it being in blue. There is a depth and strength of colour in the original suggestive of stained glass windows, the decoration being so cut off from the wording—all centrally placed—that the latter delivers its message undisturbed.

Example 5 is set in Old Face Open, Old Style No. 5, and Saxon Black, and printed in brown and grey on delicately tinted stock. In direct contrast to Example 4, here we have purity of style and simplicity of treatment. A very good heading, carefully handled and well balanced for colour proportions.

Example 6 is set in Chippendale and Westminster Old Style, the wording and the two wing ornaments being printed in blue, the remainder in brown, on Devon Valley Parchment. This competitor scores for clarity of message and balance of design.

Examples 7, 8 and 9 are the apprentices' winning designs in order of merit for a large post octavo programme title in one colour.

Example 7 is set in Goudy Oldstyle roman and italic, in good company with the Old Flower Border. Printed in a brightish blue on a cream tinted velvet finish art paper. This was awarded first place because the more important features are itemised without losing continuity; grouping, measures and balance are excellent, and the italic has been very well used.

Example 8 scored well, because of the successful use to which he put the Art Craft swash characters to obtain emphasis and give sparkle to the job. Printed in brown on a ribbed antique laid paper, the Old Face Open looks quite good; but the type used with Renaissance Border does not look so happy together as those in Example 7. The margins here are better than in Example 7.

Example 9 secured third place because of simplicity of treatment and ease with which the effect has been obtained. Set in Verona, and printed in black on antique paper, the outer border would have given improved results had it been slightly stronger.

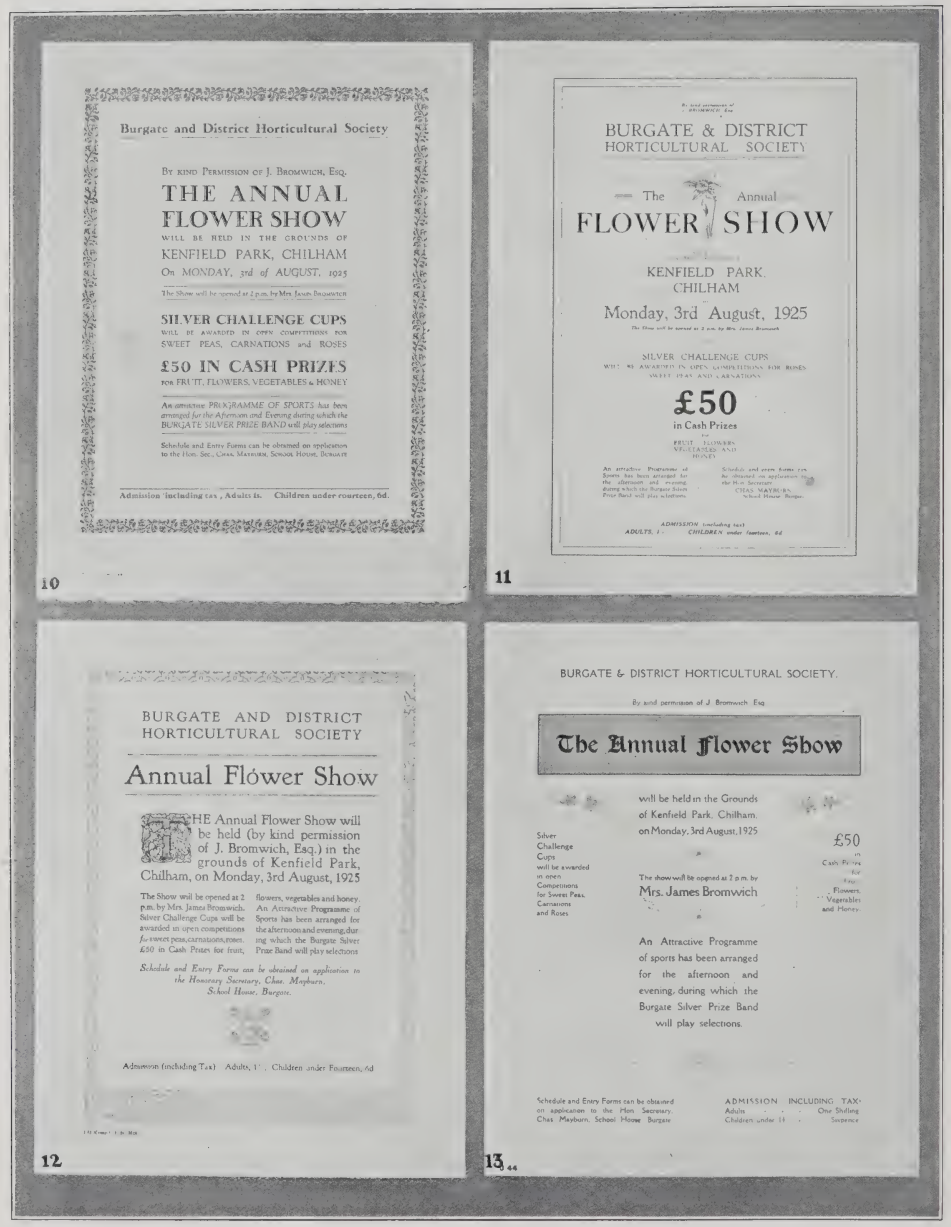
The last of the competitions it is possible to treat upon here was for a demy quarto circular (for journeymen only) in two colours for a flower show. In these days of advanced ideas in typography one need not be surprised that those famous old floral electros of thirty or more years ago are dying a natural death, and in their place we now often find the more conventional floral border and ornament.

A circular may be used as a medium for announcing events, change of address, sales, almost anything in fact; but whilst it may take the form of a displayed advertisement, it is not in the same category as a folder—which is essentially an advertisement every time.

Modern usage will turn almost anything into an advertisement; but I think we should be more correct in saying that the primary duty of a circular is to *announce* something; and the various ways in which competitors have handled the subject present quite an interesting study.

In this flower show circular competition (Examples 10, 11, 12 and 13) I am showing the first four designs, each being essentially different in conception and execution. The second and third (Examples 11 and 12) were awarded equal second place.

Example 10 is set in Narcissus, Goudy Old Style roman and italic, and a most appropriate Old Rose Border. Except for the head line, all the Narcissus and border were printed in blue, the remainder in brown, on Abbey Mills cream laid paper. The linking up of the story in Narcissus, thus separating the other details in a logical manner, has been most carefully thought out, and the whole is well grouped.


Burgate and District Horticultural Society
By kind Permission of J. Bromwich, Esq.
THE ANNUAL FLOWER SHOW
WILL BE HELD IN THE GROUNDS OF
KENFIELD PARK, CHILHAM
On MONDAY, 3rd of AUGUST, 1925
The Show will be opened at 2 p.m. by Mrs. James Bromwich
SILVER CHALLENGE CUPS
WILL BE AWARDED IN OPEN COMPETITIONS FOR
SWEET PEAS, CARNATIONS and ROSES
£50 IN CASH PRIZES
FOR FRUIT, FLOWERS, VEGETABLES & HONEY
An attractive PROGRAMME OF SPORTS has been arranged for the Afternoon and Evening during which the BURGATE SILVER PRIZE BAND will play selections
Schedule and Entry Forms can be obtained on application to the Hon. Sec., Chas. Mayburn, School House, Burgate
Admission (including tax), Adults 1s. Children under fourteen, 6d.
10
BURGATE & DISTRICT
HORTICULTURAL SOCIETY
The Annual
FLOWER SHOW
KENFIELD PARK,
CHILHAM
Monday, 3rd August, 1925
SILVER CHALLENGE CUPS
£50
in Cash Prizes
FOR
FRUIT, FLOWERS
VEGETABLES AND
HONEY
ADMISSION (including tax)
ADULTS, 1/-
CHILDREN under fourteen, 6d
11
BURGATE AND DISTRICT
HORTICULTURAL SOCIETY
Annual Flower Show
THE Annual Flower Show will be held (by kind permission of J. Bromwich, Esq.) in the grounds of Kenfield Park, Chilham, on Monday, 3rd August, 1925
The Show will be opened at 2 p.m. by Mrs. James Bromwich. Silver Challenge Cups will be awarded in open competitions for sweet peas, carnations, roses. £50 in Cash Prizes for fruit, flowers, vegetables and honey. An Attractive Programme of Sports has been arranged for the afternoon and evening, during which the Burgate Silver Prize Band will play selections
Schedule and Entry Forms can be obtained on application to the Honorary Secretary, Chas. Mayburn, School House, Burgate.
Admission (including Tax) Adults, 1/-. Children under Fourteen, 6d
12
BURGATE & DISTRICT HORTICULTURAL SOCIETY.
By kind permission of J. Bromwich Esq.
The Annual Flower Show
will be held in the Grounds of Kenfield Park, Chilham, on Monday, 3rd August, 1925
Silver Challenge Cups will be awarded in open Competitions for Sweet Peas, Carnations and Roses
£50 in Cash Prizes for Fruit, Flowers, Vegetables and Honey.
The show will be opened at 2 p.m. by
Mrs. James Bromwich
An Attractive Programme of sports has been arranged for the afternoon and evening, during which the Burgate Silver Prize Band will play selections.
Schedule and Entry Forms can be obtained on application to the Hon. Secretary, Chas. Mayburn, School House, Burgate
ADMISSION INCLUDING TAX:
Adults - One Shilling
Children under 14 - Sixpence
13

Example 11 is set in Verona, Caslon Old Face, and members of the Cheltenham family, and printed on thick white art paper; all type is in black, the flower, rule border and cut-offs in green. Here we have a free treatment suggested for practically all the display lines, whereas it is actually nothing of the sort. This design is a fine study in proportional grouping. The *natural* flower ornament—to which reference was made in the opening paragraph on this competition—fulfils its purpose, because there is no other decoration to disturb it. The "very daring" of Example 11 secured for it a place among the prize winners.

Example 12 is set in Kennerley, Cochin Italic, Westminster Initial, and an Old Border, all wording being printed in black and decoration in a subdued green on antique paper. For purity of style this is a first-rate piece of composition and printing. As a study in planning and layout, I do not think a single lead could be transposed to advantage, nor a single line or measure varied. This is what I should describe as a true circular.

Example 13 is set in Westminster Old Style and Tudor Black, and printed in black (type only), with decoration and colour beneath the main line in deep orange—on a cartridge paper. This is a very pretty piece of work, well balanced in the grouping and separation of the main items. The designer has accomplished his purpose very well indeed, and I like his idea immensely, but it is a trifle too involved for present-day work.

Although it is not possible to follow out all the details of these thirteen designs owing to miniature reproduction, there is sufficient room for thought in the application of constructive typographical design, and many a lesson may be learnt from the work of such excellent craftsmen.

As a fitting conclusion to this little chat on competition work, I should like to quote the words of William Mathews: "Up to the point of efficiency, when one is learning a trade or profession, there is comparatively little joyousness in his labour; but with the consciousness of mastery, of thorough knowledge and aptness, comes a feeling of strength, of self-satisfaction, of superiority, which takes away all sense of drudgery and makes the pursuit of one's occupation a source of constant delight."

Space and time (we go to press earlier this issue because of the Christmas holidays) prevent my answering many correspondents under "Appreciations" now, but they will receive full consideration in the February issue of THE CAXTON MAGAZINE.

All specimens—*and* calendars—and other correspondence intended for Craftsman's Corner should be addressed to H. Naylor, 8, Aubert Park, Highbury, N.5.

An Excellent Booklet and a New Machine

THE progress that is being made in photo lithography is amply demonstrated by a booklet recently issued by Pictorial Machinery, Ltd., 7, Farringdon Road, E.C.1, who will be pleased to send a copy to any of our readers who are interested.

The standard which has been reached in this production leaves nothing to be desired, whether considered from the standpoint of the type printing or the illustrations. The type is as clean and sharp as in the best letterpress work, and the specimen illustrations possess a quality unobtainable excepting by the offset process.

The "Lithotex" Process is the property of Pictorial Machinery, Ltd., and it is due to the energy and the knowledge of commercial requirements possessed by the managing director, Mr. F. T. Corkett, that such notable progress has been made in the details of the process and in the use of the "Lithotex" machine.

The booklet includes a description and illustrations of the "Lithotex" step-and-repeat machine, with a reference to the many purposes in which the machine may be used with advantage and economy. Old methods of transferring cannot be compared with the step-and-repeat process for accuracy and speed, and the ease with which a perfect duplicate plate can be made is of the greatest possible advantage in practice. The authenticated statement from a works manager that the plates run for an average of 200 reams, with a record of 500 reams—about a quarter of a million runs—is a convincing testimony of their durability.

A short description of the ingenious machine for the preparation of intaglio rollers covered with repeat designs for calico printing is also given.

The "Lithotex" machine is used for making multi-negatives of small designs in mathematically accurate register, and formerly these negatives have been printed down and duplicated on machine plates by laying the negatives down to register marks, in connection with which work a special device has been invented by the company. The booklet announces for the first time the introduction of a new machine whereby the multi-negatives are printed down with the same mechanical precision as obtains in making the negatives. The following is a brief description of the machine.

The "Printex" Negative Printer is a machine of simple construction, but on account of accuracy and rigidity has to be very substantially constructed. It weighs approximately 3 tons, occupying a space of 9 feet by 4 feet by 8 feet high. A negative of any size up to 20 inches by 16 inches can be printed down any number of times on to a metal plate up to 66 inches by 49 inches. Accuracy of register to within one thousandth of an inch is guaranteed. The machine can be operated in daylight, is of unvarying precision, and the contact between negative and metal plate is dependent on mechanical pressure. Exposures are very quickly made, all operations of the machine being expeditious and easy of control. The accuracy of all the movements of the machine is controlled by similar mechanical devices to those employed so successfully in the patent "Lithotex" step-and-repeat multi-negative making machine, and the two machines are intended to be used together as a complete plant.

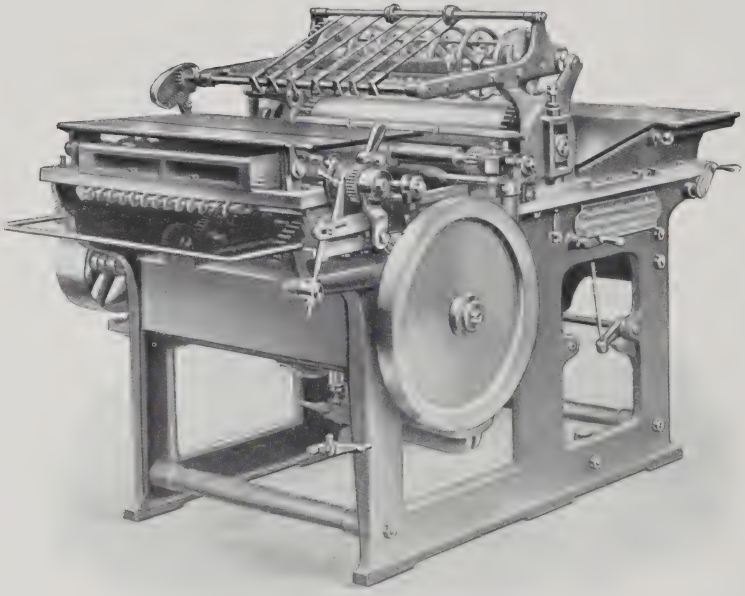
SPECIAL PATENT

1809 **1924**

ROLLERS & COMPOSITION.

INDISPENSABLE

For Booklets, Advertising Circulars, in one or more colours, smart folders, and all that large range of work always wanted quickly that every Printer has to cope with, HARRILD'S "RAPID" is indispensable.



The "RAPID."

The ideal jobbing Machine, unequalled for speed, dead register, fine inking.

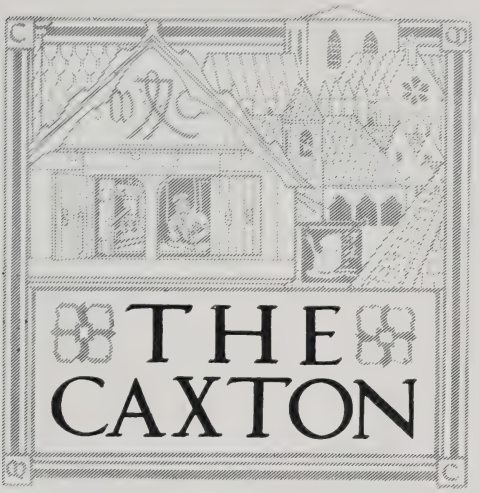
Size No. 1, Foolscap, Bed 23×18, Largest sheet, 21×16.
„ No. 2, Demy, „ 28×26, „ „ 25×20.

HARRILD & SONS, LTD.,

"Fleet" Works, Norwich Street, Fetter Lane, LONDON, E.C.4.

COLONIAL PRINTERS CAN GET FULL DETAILS OF OUR MACHINERY FROM OUR

Sole Agents for South Africa: Spicers (Export), Ltd., Cape Town, Durban, and Johannesburg.
Sole Agents for New Zealand: Brown & Stewart, Auckland and Christchurch.
Sole Agents for Madras Presidency: Massey & Co., Ltd., Madras, S. India.
Sole Agents for Australia: Edwards, Dunlop & Co., Ltd., Sydney, Melbourne, and Brisbane
(Wharfedale Printing Machines and Self-Clamp Guillotines.)
Middows Bros. & Linton, Ltd., Sydney and Melbourne (Box-Making, Binders' and Stereo Machinery, &c.)



London, January, 1925

Trade Review of 1924

WE hope we may be permitted in reviewing the work of the past year to express our pleasure at the extremely satisfactory recognition which THE CAXTON MAGAZINE has met with in its efforts to further the best interests of the craft in a non-partisan spirit, and to give the greatest possible prominence to events which make for an improved standard of workmanship. We do not propose to act the part of a monthly newspaper or magazine which gives equal attention to matters of all kinds whether their importance be great or small; our business is to record events that are of consequence; but our chief concern is to stress those features in the monthly round which are likely to be of lasting importance to the interests of the trade as a whole.

Nothing succeeds like success, and our constantly increasing circulation, and the frequent public references, by both masters and men, to the value of THE CAXTON to all sections of the craft, give us a most satisfactory assurance that the policy we have adopted meets with an ever-increasing amount of approval from those who are most competent to judge the value of our work.

TECHNICAL EDUCATION.

The London School of Printing, having completed its second year of work, has amply fulfilled the promise that was given in 1923. A highly satisfactory feature of the organisation of the school is the inclusion in the school committee of representatives selected by the trade organisation in London, including masters, overseers and men, who collectively subscribe nearly £3,000 per annum towards its maintenance. As a further proof of the interest which the industry takes in the school, a number of manufacturers have supplied machinery and other forms of equipment without cost to the institution. At the end of the first session it became evident that additional accommodation would have to be provided, and a further £11,000 has been expended in erecting another storey to the present building. The number of students at present in the school is 2,300.

In London, the Central School of Arts and Crafts and the Camberwell School, both fulfil an important part in the educational scheme of the printing trade, and it is to be hoped that these institutions will continue to progress upon their own lines.

Satisfactory features of the development of technical training in all centres are the increasing number of apprentices who are released during working hours to attend technical classes, and the provision of day courses for the training of those who are to fill positions of responsibility. We understand that the Joint Industrial Council of the Printing and Allied Trades has prepared an apprenticeship scheme for the printing industry, containing provisions which shall govern the selection of apprentices for the trade, and means whereby their progress and training may be under supervision during the whole period of their indenture.

MECHANICAL COMPOSITION.

There are no important developments to be recorded during the past year in the mechanism of composing machines, but existing improvements in the range of usefulness and flexibility of the machines is being more fully utilised in practice.

The use of mechanical composition in display setting is still a subject upon which a final decision has not yet been reached in this country; but we have not made so much progress as America in this respect. It has yet to be shown whether under the conditions which prevail in English newspaper offices it is possible to set display lines on the machine economically. To achieve anything approaching satisfactory results the most careful organisation is necessary, and it is questionable whether in any case the variety in styles of advertisement display to which English newspaper readers are accustomed can be achieved commercially except by the method of setting display at case.

TYPOGRAPHY.

One of the outstanding features of the year in the typographic world might be described as a growing "type consciousness." Not so many years ago the public took its types for granted, and even the printers themselves in many cases accepted without question the new faces which the typefounders provided for them. The position to-day shows a remarkable change; classic names such as Garamond, Nicolas Cochin, Bodoni, Baskerville and Goudy, and now even the Poliphilus of Aldus are mentioned as mere commonplaces! Printers have been educated to a knowledge of type forms, and no doubt the advertising agents in their search for new snares to catch the eyes of readers have encouraged a demand for variety in type faces. The direction in which typographic development is at present moving is unmistakable. Experts in the study of type forms are constantly seeking among the best examples of fifteenth and sixteenth century printing for types which possess originality combined with purity of form, and we are fortunate in the present policy of composing machine makers and typefounders who are vying one with another to place at the disposal of printers types of sound design which will meet the present taste. It is to be hoped that we shall soon pass through this stage of revived antiquity, however good it may be, and discover in this country men who are capable of designing new types that shall be the expression of twentieth-century typography in England.

During the year the Lanston Monotype Corporation have introduced a Baskerville series, and have also re-cut the type used by Aldus in the Hypnerotomachia Poliphili issued in 1499, and have also produced an

Italic by Blado to be used with it. This type was used in setting "Four Centuries of Fine Printing" by Stanley Morison, the outstanding book on the bibliography of our subject during the year.

Linotype & Machinery, Ltd., have also recently produced a new type based on a classic model of Granjon's, which promises to attain a well-deserved success. In display type the most important event in the year is the wide use of the Narcissus series designed by Prof. Tiemann for the Klingspor Foundry in Germany.

The improved standards in typographic display are greatly encouraged by the continued progress that is shown in the type specimens that are issued. Messrs. Caslon during the year have issued a handsome *brochure* on Caslon Old Face, and Stephenson & Blake have published a handsome new specimen book. The two important house organs, The Monotype Recorder and The Linotype Record, are both, in their own way, performing a valuable service in demonstrating the ways the two machines can be used to the best advantage in producing work of the highest possible quality. A comprehensive specimen book has also been issued by the American Type Foundry.

MACHINERY.

Of letterpress machinery there is little to record during the year, and no doubt manufacturers are concentrating their attention and reserving their new designs for the exhibition of the printing and allied trades to be held at the Royal Agricultural Hall from May 16 to 30 next.

In stereotyping, however, developments are taking place. The newspaper practice for a number of years has been to prepare the matrices by taking the impression on dry flong under a suitable mangle. This method is now giving place to the use of powerful presses in which a vertical platen pressure is substituted for a rolling pressure; the Winkler machine is of this type, and is being extensively used.

OFFSET PRINTING.

With an increasing knowledge of the uses to which offset printing may be applied, the applications of the process are constantly extending; the cost sheets prove that it is cheaper with many classes of work to put a job down on to a machine plate and print it offset than it is to print it on a letterpress machine, particularly in the case of a letterpress job that can be printed on both sides of the paper on a perfector machine.

The lithographic trade has now had an opportunity to become even more familiar with the technique of both photo-lithography and the correct use of the offset machine and the right kind of inks, with the result that the quality of offset printing is improving with great rapidity. In colour work it is not yet possible to notice a general improvement, although a few firms who have concentrated on this branch of the subject have achieved notable success. Offset printing and photo-lithography are now definitely and closely allied, and it would appear that the combined processes have now passed through the stage wherein scattered uncoordinated efforts are being made by a few workers, and further technical progress may be expected through increased knowledge of the staffs who are engaged in the work.

Linotype & Machinery, Ltd., have designed and manufactured a rotary web offset machine which has been running successfully at a speed of 12,000 impressions per hour.

PHOTOGRAVURE.

No extension in the use of machine photogravure has taken place in this country during the year, although the periodicals which continue to use the process have shown an undoubted improvement in the appearance of type matter printed by this method. In America, and particularly in Germany, there is an increase in the use of machine photogravure for colour printing, and in the latter country results of extreme beauty are being regularly attained. At present gravure printing in England is being overshadowed by the phenomenal development in offset work; but it is to be anticipated that a simplified technique in the photogravure process will be forthcoming, and with it an extension of its applications.

NEW PROCESSES.

Although the transmission of photographs by telephony can scarcely be described as a printing process, its satisfactory achievement must be regarded among the items of interest in the year's progress. Results of astonishing technical excellence have been obtained, and there appears no reason to doubt that similar transmission may soon be possible through the medium of wireless installations. Further developments must inevitably react on the printing trade in one form or another.

The Aquatone process is a new development which has recently assumed commercial importance. The process, which was invented by Mr. Robert John, is the property of the Aquatone Corporation. The specimens shown in this country are of a very high order; they closely approach the quality of photographic prints or high-grade collotypes, and it is claimed that the process can be worked uniformly at a speed of 3,000 an hour on an ordinary rotary offset press.

Processes whereby printed type pages may be copied photographically for offset printing without the use of the camera continue to be introduced, but their commercial value has not yet been proved. The designers of machines for setting type photographically continue their experimental work, but up to the present time no machines have been developd sufficiently to be placed on the market.

The Dominus Series

THE trend of advertising display at present is largely towards the use of lines that require the emphasis of shaded or hand-tooled types. The old-established foundry of Stephenson, Blake & Co., Ltd., has now produced an entirely original series of this character, the distinctive features of which are indicated in the alphabet reproduced below. Dominus is different from any shaded or open type that has been designed, and will no doubt appeal strongly to advertisers who require

ABCDEFGHIJKLMN
OPQRSTUVWXYZ
abcdefghijklmn
opqrstuvwxyz&

18 Point Dominus

an open letter possessing unusually strong characteristics combined with softness, and a smooth running effect conducive to easy reading. There is always a risk in shaded letters of this kind that the shading will fill up in printing, but in the present case this difficulty has been kept in mind, and even in the smallest sizes such troubles have been reduced to the minimum.

Intaglio and Photogravure Printing

By Mr. WILLIAM GAMBLE, F.R.P.S., F.O.S.

IN connection with the City of Bradford School of Art and Crafts, Mr. William Gamble recently gave an interesting lecture on "Intaglio and Photogravure Printing," the chair being taken by H. Gaskarth, Esq. The lecture was illustrated by lantern slides demonstrating the principles of the processes and showing the types of machines employed. A large number of beautiful specimens of monochrome and colour rotary gravure were displayed, and aroused great interest.

The lecturer first explained the distinction between intaglio and photogravure engraving, showing that in the former method the design was characterised by sharply defined lines, dots, stipple or ruled tints, the engraving being approximately the same depth all over, deeper tones being obtained by thicker lines or larger dots, or by placing the lines or dots closer together. Halftone effects could be got by making what was termed an inverted halftone, the dots being sunk instead of being raised, but such work had nothing in common with the true photogravure result, and was in no way comparable for quality. The term photogravure was applied to the process invented by Fox Talbot and afterwards improved on by Klic. Fox Talbot coated his copper plates with gelatine and bichromate, having first dusted them over with a resinous powder which he fixed with heat, then etching through the gelatine in which the photographic tones were represented by harder or softer gelatine. Klic similarly dusted the copper plate with a resist powder, but used bitumen instead of resin, and instead of coating the plate with gelatine he used carbon tissue, which consists of paper coated with gelatine mixed with a coloured pigment, the latter enabling the progress of the etching to be seen. The tissue was made sensitive with bichromate and printed under a positive photograph on glass. This print was squeezed into contact with the copper plate, and warm water applied to the back until the paper could be stripped off, enabling the image to be developed by further treatment with warm water. The resulting image was a relief in gelatine, standing up most thickly in the parts corresponding to the whites of the picture, and being thinnest where the shadows were most dense. The effect of this was that the etching solution penetrated most quickly and strongly in the thin parts, and in a graduating scale as the tones rose towards the thicker layer of gelatine. The plate was thus etched to different depths, and such depths held more or less ink, so that when the plate was printed there was more ink deposited on the paper in the shadows than in the light tones, giving an extremely rich and beautiful effect. The grain points from the bitumen dust broke up the solid blacks into a granular surface like sandpaper, softening the gradations, and at the same time preventing the ink from being dragged out of the hollows when wiping the plate. The grain also controlled the other tones, but disappeared entirely where the paper should be white. The plates produced by this process had to be inked and wiped by hand and printed on a hand-operated copperplate press, so that the work was slow, tedious and laborious.

Colour work was done from such plates by inking the plate in different parts with coloured inks, applied by means of dabbers or brushes, and wiping the surface when the colouring was completed. Great skill was required, and the work was very slow, sometimes not more than four or five prints being turned out in a day. Klic realised that his process was never going to be of any great commercial value with such a method of printing, and he conceived the idea that if he could make the engraving on copper cylinders an print in the same way as is done in textile and wallpaper printing the speed of production would be enormously increased. He was at that time carrying out experimental work in the Manchester district for producing cylinders for textile printing, so that he knew something about the requirements of the business. He succeeded in interesting Messrs. Storey Bros., of Lancaster, whose principal business was the printing of table baizes, oilcloths, etc., and they set up a department of their works for operating Klic's process, running it as a separate concern under the name of the Rembrandt Intaglio Printing Co., Ltd. This was somewhere about the year 1894, and the company turned out its first order in 1895. The work created a sensation, and inquiries began to be made in the trade as to how the process was worked. The company, however, kept their methods strictly secret, and even to this day no details have been published as to their actual ways and means of working. There were many conjectures, but how nearly correct they were has never been confirmed. In The Process Year Book for 1897 the first description of what was assumed to be the process was published, and it was admitted in the course of the evidence in the Merten's case in 1914 that the description was substantially correct. The information was obtained from a well-known photogravure worker, who had evidently got a good clue to the method, if he had not the whole secret. Continental firms soon began turning out work of a similar kind, notably Lowy, in Vienna, and Bruckmann, of Munich, and eventually some English firms. The secret has now long been out so far as the general method of procedure is concerned, and the process is being worked in much the same way all over the world.

Klic evidently found that it was not possible to apply the same method of etching on the cylinders as for hand-press plates. It did not lend itself to the way of wiping the cylinders, which was by means of a steel scraper known as the "doctor." If the etching on the cylinder had been produced by the bitumen graining method, the scraper would have dragged the ink out of the heavy shadows, and the grain points would have quickly worn down, so that a clean wipe would have been impossible. Klic saw that in order to hold the ink in the hollows, and also give a support to the doctor as it glides over the surface it was necessary to introduce a screen, but not the kind of screen used for halftone blocks. The screen played no part in producing the tone values; it simply made a sort of honeycomb over the etched image, and just as the honeycomb of the bees holds the honey so this screen holds the ink. The doctor glides over the tops of the walls of this screen formation,

leaving the ink in the hollows and cleaning all the rest of the paper where it is to be left white. The screen walls are so extremely thin that they can hardly be detected in the print. In fact, the ink floods over them, and almost obliterates the white lines which would otherwise appear on the paper. The spaces between the screen lines were etched to different depths. As the tones get darker the etching becomes correspondingly deeper until it reaches the maximum depth in the shadows. That is where the difference came in between photogravure and halftone intaglio. In the latter the hollows which hold the ink would be practically one depth, but they would vary in width, so as to produce big dots or small dots of ink on the paper. The surface can be wiped by the doctor, but it does not act so perfectly. Those who have tried it know that the ink seems to be dragged out of the large cups, and the effect is rough and weak, being in no way comparable to the richness and smoothness of the true photogravure print. The intaglio or inverted halftone has been tried several times, because it was thought that it would be more suitable for newspaper work if the carbon tissue could be dispensed with, but all such attempts have proved failures, and the method is no longer used.

The lecturer said he could not conceive that it would ever be possible to make a success of inverted halftones against the Klic process of rotary photogravure. Halftone was perfect for block work, and was the best method yet discovered for offset plates, but it was contrary to the principles on which it was based to use it for rotary photogravure. It might be asked why the methods used for cylinders could not be equally applied to flat plates to be printed on flat-bed machines. This could be done, but it was by no means practical. The disadvantage was that it was more difficult to get a clean wipe, more ink was wasted than is used, and the printing was very slow—not more than about 500 per hour, against 2,000 to 2,500 on sheet rotaries with automatic feeders, and 5,000 to 8,000 or more on web rotaries in good-class work, though speeds of 20,000 to 25,000 had been reached in newspaper work. Difficulties of drying the ink arose with high speeds, and in actual practice 15,000 to 18,000 had been found to be about the limit. A great deal depended on the ink used. The quickest time for natural drying the lecturer had heard of was 14 seconds, but the drying could be hastened by passing the paper over steam-heated drums. Water ink, which consisted of dyes or pigments emulsified in water with some thickening media would dry more quickly than spirit ink, especially on newsprint, and the drying could be hastened by more heat, as the ink was not inflammable like the spirit ink. Thus a higher printing speed could be obtained with water ink. The cost of the best spirit ink was about the same as good letterpress ink, but the consumption for a relative size sheet was higher than either letterpress or offset. This was due to evaporation, probably more waste, and a greater amount of ink deposited on the paper, especially when the pictures had heavy shadows. Against this could be set off the higher speed of printing, better quality of the product, possibility of using cheaper papers, absence of make-ready, fewer stoppages for washing-up, and only one ink roller to manage.

As to the cost of making cylinders compared with blocks, it had been found in well-equipped photogravure establishments that cylinders for producing large sheets of illustrations, such as for illustrated papers, could be produced more cheaply than the same area of blocks, whilst the saving in machining was considerable. A serious item of cost in the process was the grinding, polishing and coppering of the cylinders, but it might become possible to obviate this by using thin copper plates bent round iron cylinders in much the same way as zinc plates were applied to rotary offset presses. This would be an immense gain in economy, and the process would have a much wider field of usefulness, because any printer might have a photogravure machine and get his plates made by the photo-engraver. This great improvement was likely to be soon available, as the firm of Penrose had successfully made machines for printing from sheets of copper, both for newspaper work and for job printing. They had also applied the offset principle to photographic printing. The advantages were a greater softness of tone, and facility of printing on paper which would ordinarily be difficult, whilst the impression required was less heavy than for direct printing. If photogravure was to invade the domain of offset printing there would seem to be little scope left for that process, because gravure was undoubtedly more advantageous than offset in many ways and for many purposes. It had been thought that photogravure could never displace offset and direct lithography for colour work, but that would probably prove an erroneous belief, for there were several firms in this country and on the Continent as well as in America who had attacked the problem with more or less success, as proved by the specimens shown.

An important point in favour of the photogravure colour process was that, whilst offset might require five or six printings to get a satisfactory result, it could be got by photogravure in three or four. Moreover, the cost was distinctly in favour of photogravure. So far colour photogravure on web rotary machines had not been successful, though there were at least half a dozen machines in course of being tried for simultaneous printing of three or four colours, and the speed anticipated was 4,000 finished prints per hour. There was no doubt that the problem of printing colour photogravure on the web would ultimately be solved. In the opinion of the lecturer, rotary photogravure, whether for monochrome or colour, was going to be one of the big things of the future. We had only touched the fringe of its possibilities so far. Perhaps it was not generally realised in this country what strides the process was making in America, where the process had been taken up whole-heartedly, and in Germany, France, and throughout the Continent. There was no doubt that where photogravure was done thoroughly it was a success, and was used more and more. The lecturer said he was unmoved by the prognostications of those who thought that rotary photogravure would only have its day, and his faith in the process was unshaken. It was a method that was so simple in its principles, so excellent in the quality of its product, so capable of producing a large output at high speed, and so useful in its applications that he could not believe it could do otherwise than go forward with great and rapid strides.

Federation Annual Meetings

THE date of the next annual meetings of the Federation of Master Printers at Buxton has been changed, and is now definitely fixed for May 9-13.

The Collective Advertising Campaign

THE campaign for increasing the use of print had a good send-off so far as publicity goes at a largely-attended meeting at the Stationers' Hall in London. This gathering was arranged by the London Master Printers' Association, and the President, Mr. A. Langley, occupied the chair. The meeting was remarkable for an address of quite a unique character delivered by Mr. Percy Best, managing director of Messrs. Shoolbred & Co., and chairman of the Incorporated Association of Retail Distributors.

Dividing the subject of his address into three sections, English, Type and Lay-out, and Truth—Mr. Best proceeded to raise advertising to a very high level. Speaking of the use of good English, he said he had appealed to Sir Arthur Quiller-Couch, asking him for suggestions as to what examples he might read as the best illustrations of the beauty and descriptive quality of the English language. Sir Arthur had referred him to "The Wilderness," in Isaiah xxxv., as the best selection to make. As another example of simple but effective description, Mr. Best quoted, from "Julius Cæsar," the scene between Brutus and Cassius, where Cassius seeks to wean Brutus from his objections to a certain enterprise.

Speaking on the subject of type, Mr. Best asked master printers when they used type not to select the cheapest founts, but the very best for their particular purpose. He believed that we had beautiful type in this country, as beautiful as there was even in America, though in that country they might have a greater variety. He thought it was a reflection on master printers when they allowed business men to lead them to the use of type which was sometimes unworthy even of the poor quality of paper on which it was printed. As to the lay-out or presentation of advertising matter, Mr. Best observed that he was not an expert, but he knew the things which pleased, and if there was balance and harmony in the presentation, then he thought that presentation must be pretty near right.

Mr. Best spoke indignantly of the contemptible use of the English language to deceive. He regretted that in commerce too often the printed word had become the servant of avarice, rather than the interpreter of truth, and it was in the hands of master printers to prevent a continuance of that if they were big enough and strong enough, and if they stood fast to their principles. He suggested that master printers should adopt as the emblem of their Association "The Lamp of Truth." If there was a hallmark which guaranteed the quality of silver, why not a trade mark which would establish the truth of the printed word? They needed that to-day as they never needed it before, and the lamp of truth, when impressed on posters, catalogues, leaflets, and press advertisements, should be a guarantee that the statements made had been tested and found to be true.

Mr. Frank Colebrook at the conclusion of this address raised the very pertinent question as to how a printer could guarantee the veracity of what he was asked to print.

Mr. Best suggested that there should be some certificate which the customer would sign as to the truth of the statements printed. If master printers were strong enough to establish that as a principle, it should be of advantage to the trader to sign the certificate, because every trader hoped and believed that the people reading his printed word would realise that he was a man who printed the truth.

Other speakers included Mr. W. B. Wykes (President of the Federation of Master Printers), Mr. Howard Hazell (vice-president), Lt.-Col. Barrell (Portsmouth), Mr. G. F. Storey (Leeds), and Mr. C. Higham (Hyde). All of these made admirable speeches, but frankly we think the meeting missed fire.

Printers do not need to be told of the advantages of advertising, nor are they particularly interested in the story of how the Federation evolved this particular scheme. Here is the scheme. It is that which needs expounding. The very first question put by a member of the audience (apart from Mr. Colebrook) showed this need. Of course, advertising is good, and, of course, there are lots of printers who have persuaded customers to do more of it. That is not the particular point.

Here is a scheme for urging sellers to use booklets and other particular advertising media. Printers everywhere are asked to support it. But lots of printers have never done this sort of thing, never prepared lay-outs and dummies for this class of work, never considered what they would say if a bacon curer offered him an order on condition that he did the complete job, including the preparation of the contents of the booklet.

These are the things the average printer wants to know, and if the campaign is to succeed attention will have to be given to points like these. We urge our readers to peruse again the excellent and wise words spoken by Mr. Simnett at the Federation meetings at Norwich. No manufacturer could offer him a printing job he could not do. If the printer is to be pulled up by the customer at the first fence, co-operative advertising is not going to do him much good.

In our judgment, special attention needs to be given to instructing the printer in "following up" the sending of the booklet to those he thinks may be influenced. Big firms can do this—they have their own qualified men who can make all sorts of suggestions to the customer. But the average printer often has to attempt this himself. And he needs help. Unless he is prepared to undertake a canvass of his customers prepared with arguments, plans and suggestions, the sending out of this booklet will be little better than pouring out a few buckets of water on the Sahara.

Our friends in the trade will, we are sure, accept these criticisms in good spirit. Some of them will remember, what most seem to have forgotten, that this scheme was first suggested in THE CAXTON MAGAZINE. In February, 1922, our first article was "The Next Great Move in the Printing Trade," in which we outlined a scheme for the revival and creation of trade by collective advertising. In the preparation of that article we made exhaustive inquiries as to the working of similar schemes in other industries. We followed that up by inviting a number of prominent leaders of the Federation to lunch and discussing the matter with them. This was followed by a further long article in March, 1922, and in the following month we published some most interesting correspondence on

the subject, including a letter from Mr. W. H. Sessions, of York, who subsequently raised the question at the annual meetings of the Federation held in London in May, 1923.

We recall these things, not so much to take credit to ourselves as to show our real interest in the scheme, and to make it clear that any criticism or suggestion we make is not born of the moment, but is the result of careful thought and investigation. We have abundant faith in collective advertising as applied to the printing trade, and are anxious that a good scheme should have every possible chance to justify itself. But evolving a scheme is one thing, and getting printers to understand how to work it to advantage is another. The scheme will not work itself, and hundreds of printers will find it useless unless they receive very direct and practical help as to how to work it.

Debecey Specialities

Most printers get occasional orders which it pays them to allow other people to print. The Debecey Co., Ltd., Oldbury, with a London depot at 14, Bow Lane, Cannon Street, E.C.4, have just issued a broadside illustrating dozens of these lines —order books, statement forms, receipt books, drapers' checks, bill books, vouchers, dinner slips, delivery books, billiard checks, cloakroom tickets, and things of that sort—which it might be wise for a printer to have by him.

Accident to Mr. C. W. Bowerman, M.P.

Mr. C. W. Bowerman, M.P. for Deptford, ex-secretary of the Trades Union Congress, and late general secretary of the London Society of Compositors, met with a serious accident on December 20. He was on the platform of a London railway station when, apparently seized with sudden illness, he fell on the lines. He was found to have received injuries to his head, and was taken to his home in a serious condition.

The House of Cassell

The historic home of The House of Cassell in La Belle Sauvage Yard, Ludgate Hill, E.C., has lately been remodelled and reconstructed. Associations of centuries surround this site. The main buildings have been remodelled internally and equipped with installations for central heating, electric lighting, sprinklers, and vacuum cleaning. The floors have been extended to carry very heavy machinery, goods lifts have been installed, and other important works in connection with printing and publishing have been carried out.

London School of Printing

There was a happy function held at the London School of Printing and Kindred Trades, Stamford Street, S.E., on Friday, December 19, when some seventy whole-time students and members of the staff arranged a luncheon at the end of the term. Lord Riddell (President of the School), Mr. W. Howard Hazell, J.P. (Vice-president of the Master Printers' Federation), Mr. Alfred Langley (President of the London Master Printers' Association), and Mr. T. W. McAra, J.P. (secretary of the Newspaper Proprietors' Association), spoke in a humorous vein. The students gave Lord Riddell a great reception, and on his leaving the school they formed an arch with compositors' setting-sticks, through which his Lordship had to walk covered with streamers with which the students decorated him.

BOOKLETS
Collective Advertising
The
SPECIALIZED
EDITORIAL
AGENCY
is prepared to write and illustrate with original drawings Booklets which printers may be asked to undertake in connection with the new advertising campaign.
¶ This Agency has a Staff of competent writers and artists capable of dealing with this class of work.
Specialized Editorial Agency.
(EDITOR:— A.E.OWEN JONES)
4.VERNON PLACE,SOUTHAMPTON ROW.
LONDON.W.C.1.

Distinguished Honour for Mr. E. G. Arnold

Past President Federation of Master Printers

AT the celebration of the Jubilee of the Yorkshire College of Science and the coming of age of the University of Leeds, the honorary degree of Doctor of Laws was conferred upon Mr. Edmund George Arnold—well known throughout printing circles in the United Kingdom. Mr. Arnold has been a leader of the Federation for many years, and is an ex-president.

The conferment took place in the Leeds Town Hall at a special congregation in the presence of a crowded audience, and amongst others to receive degrees were the Earl of Balfour and Sir Michael Sadler, formerly Vice-Chancellor of the Leeds University.

Presenting Mr. E. G. Arnold to the Chancellor, the Duke of Devonshire, the Vice-Chancellor, Dr. Baillie said: There are few finer opportunities of public service than those presented by the civic life of a great community. Fortunately, for this country and for this city, there has ever been a steady succession of capable men, whose love for their native place, their zeal for its prosperity, and their high sense of duty, have been sufficient inducement to undertake the exacting and arduous labour entailed in promoting the common weal in all its forms. In Mr. Edmund George Arnold we have a conspicuous example of the local patriot, who willingly places at the disposal of his fellow-citizens the talents which have won him success in private enterprise. His active participation in the public life of this city dates back for many years. The marked confidence and honour in which he is held were confirmed and justified by his occupancy of the office of Lord Mayor during one of the most trying and anxious periods of the war—from 1916 to 1917. He has been a member of the Council and Court of this University since 1920, and was elected Pro-Chancellor in June, 1921, on the retirement from that office of Mr. Arthur G. Lupton, one of the oldest and most devoted friends of the University. It can safely be said that no public institution has ever received more whole-hearted and unstinted service than that given by Mr. Arnold to the University of Leeds. No detail is too minute to be noted. Nothing is left to chance except to provide openings and opportunities. In his assiduous concern for the material welfare of the University, its staff, its students, its structure, the day is too short for labour, and the night too long for repose. It was at a time of considerable anxiety for the fortunes of the University when Mr. Arnold entered upon the adverse and some unfamiliar waters of academic politics. Largely by his energy and persuasive powers, the practical sympathy of the local education authorities was engaged on behalf of the University; and their splendid response to the appeal made in the interests of the higher education of Yorkshire has vastly improved the position of this seat of learning. Since his advent to office, marked progress has been made, and obstinate difficulties have given way. It will always be the privilege of this University to recognise in a public manner the talents devoted to the public service. The whole University of Leeds unites in doing honour to one who has so well earned the gratitude of staff and students, and the respect of his colleagues on the Court and Council.

As Pro-Chancellor, Dr. E. G. Arnold made the presentation to the University of a portrait of Sir Michael Sadler, in token of appreciation of Sir Michael's work in the University during the years of his Vice-Chancellorship.

Preventing Workups in Mortises

A COMMON cause of "work-ups" is the presence of mortised cuts in the forme. If the type inside the mortise does not work up the spaces and justifying material, the cut itself will work up the leads and slugs and furniture around the outside. This is particularly noticeable when the mortise is large compared with the cut itself, that is, if the "frame" is narrow and therefore weak.

If the type inside the mortise is plugged in too tightly, the frame bulges outward at the base, and this wedge-shaped cut will push upward after each impression whatever surrounds it in the forme.

On the other hand, if the material inside the mortised space is not sufficient to prevent the frame from yielding inward under the pressure of the outside lock-up, the effect of this pressure will be to force the spacing material inside the mortise upward at each impression.

Careful justification is practically the only remedy. When there is room for them, some sort of midget quoins help to get even pressure, and therefore perfect justification inside the frame. Before locking the forme, these quoins should be loosened. Then the outside pressure should be applied carefully until the frame is held firmly. The cut should now be struck sharply with the palm of the hand to make sure that it is squarely on its feet. Now the inside quoins may be tightened until the forme lifts. It should be tested again to make sure that it has not sprung up, and if it has, the inside pressure decreased while the outside lock-up is tightened.

There is no possibility of getting a mortise with absolutely perpendicular sides when a jig saw is used to do the cutting. The operation of sawing must be followed up by squaring up the sides of the cut with a broach. Most engravers are not equipped with a broach, and depend upon a file to true up mortises. Even the best of lock-up will not correct warped or badly-slanted mortises, so it should be the first concern of the compositor, when he is called upon to place type-matter in a mortise, to see that the mortise is properly cut. Then the stone man will have a chance to lock up a forme that will stay down.—Pacific Printer and Publisher.

Why Monotype

AT a lunch given by the Lanston Monotype Corporation, Ltd., to the members of the London and District Monotype Users' Association last month Mr. W. I. Burch presided, and was supported by Mr. W. B. Wykes (President of the Master Printers' Federation), Mr. A. Langley (President London Master Printers' Association), Mr. A. le Pine Strange (President of the Home Counties Alliance), Mr. G. P. Reveirs (President of the London and District M.U.A.), Mr. Alfred Blades, Mr. A. E. Goodwin (Secretary Master Printers' Federation), and about 80 members.

After luncheon and the transaction of routine business Mr. Reveirs, Junr., spoke on Why "Monotype?" He disclaimed any title to infallability that was acquired not inherited, but he supposed he had been asked to speak because of the fact that the firm he was proud to be associated with had produced the earliest and one of the largest living technical journals for a period of over seventy years. It enjoyed a reputation for being well printed, and therefore when they came to consider Why "Monotype"? he had to reply, because quality was the first and foremost consideration, and, secondly, versatility.

The method whereby they arrived at their decision he thought would interest them. The time arrived when they realised that the days of hand composition for the text of their journal had passed. They had to decide what method to adopt. The capital outlay and cost of running they regarded as minor considerations. Quality was the main question. First of all they had three articles set by different machines by the makers of the machines, and they printed these articles side by side with their own hand-set matter. They arrived at a certain conclusion. They felt, however, it was not quite a fair test, so decided to enlist the help of friends in the trade, and they had another series of articles set on three different machines under ordinary printing office conditions, and again printed the articles side by side, and again compared result and arrived at a conclusion. They decided to submit these specimen pages to the judgment of the editors and proprietors of the journal. These gentlemen were only concerned with the appearance of the finished article, and were not influenced by the cost or any other consideration. On this test the firm decided to adopt "Monotype" composition. How far had this decision been justified? To the utmost limit.

They had never put the "Monotype" to any test it had not responded to handsomely. To-day it would have been quite impossible to produce the size of paper required in the time by hand composition. It could not be produced at a lower cost by other machines. They were told that whilst the "Monotype" was invaluable for book and jobbing work, it was not suitable for a weekly technical journal. They had proved this statement to be incorrect; it was simply a matter of organisation. The two operations gave them no anxiety—not even on press day, when the pressure is almost as great in an up-to-date technical journal as in a daily newspaper office.

Some of the issues of their journal were one mass of tables and algebraical quotations. Pages of minion and ruby, all set by "Monotype," even the advertisement borders. They had not yet been able to set their display pages of advertisements, simply because of a lack of space to put the machine, but they hoped before long to add a display attachment to their plant, and then to show them this old established technical journal, from cover to cover, set by the "Monotype." On the score of quality and versatility the "Monotype," in his opinion, was unequalled for a technical journal. There remained the question of price and cost, which could not be ignored. Does it pay? All users of the "Monotype" in book and jobbing work knew it did pay them to install "Monotype" machines. Their experience confirmed this opinion. The final test is the annual balance sheet. Excluding the difficult years of the war he could definitely state that their balance sheets were more satisfactory after the installation of the "Monotype" than before. So that not only on the grounds of quality and versatility, but because it did pay he had answered the question: Why "Monotype" a weekly technical journal?

BUY YOUR

Lithographic Varnishes

Direct from the Manufacturers

91/2, SHOE LANE, LONDON - E.C.4
HOLBORN 1930.
3 EAST REGISTER ST. - EDINBURGH
CENTRAL 1126.

DANE & CO.

Established 1853.

Only Pure Calcutta Linseed Oil (well matured) is used in the manufacture of Dane & Co's Lithographic Varnishes.

Usher-Walker's New Premises

AFTER more than forty years the headquarters of Usher & Co. and Walker Bros., now known as Usher-Walker, Ltd., have been moved from Bouverie Street, Fleet Street, to Great New Street, E.C.4. These new premises are situated a few yards to the north of Fleet Street, and it has the distinction of being the largest single building in the City of London. In the basement will be installed the engineering department; the ground floor is an almost ideal showroom, where will be displayed a very extensive range of machinery for printers, box-makers, and others; on the first floor are offices, consulting rooms, and the valuation department; and above these are the sundries department for the sale of small machinery, composing room, bookbinding, die stamping, and other machinery and accessories; and the laboratories and testing-rooms of Messrs. Usher's ink-making experts.

The history of Usher & Co. and Walker Bros. goes back almost to the middle of the last century. The glycerine roller, which superseded the glue and molasses article, was invented in 1854 by Mr. Thomas De La Rue, and a few years later Messrs. Usher & Co. (Mr. E. Walker and Mr. Usher) introduced an improved "non-exhausting" composition, and laid down a plant for its manufacture at Pentonville, London. The new roller was a considerable improvement on anything then available, and, consequently, achieved great success.

Mr. E. Walker, the founder of the business, was a remarkable man in many ways. He was a practical engineer and an experienced newspaper printer. For some time he was in charge of the Standard newspaper, then a very successful daily, with morning and evening editions, and during that period he designed and erected (by direct labour) the large and handsome building in Shoe Lane, in which the Daily Express is now produced, and was one of the first to instal web printing machinery.

In the year 1875 the business of Usher & Co. was acquired by him, and five years later, under the firm name of Walker Bros., he commenced business as a printers' engineer and furnisher, being joined at intervals by his four sons.

Increasing business had made the old premises quite inadequate. Auxiliary factories and warehouses were secured. But now an entirely new place has been built, specially designed to meet every requirement. Gathered under a single roof Usher-Walker House—an engineering staff and equipment equal to any emergency, a valuation department, and experts in ink-making always available for the solution of those knotty problems which are constantly arising.

Master Printers' Bible

In recognition of the sermon preached by the Bishop of Thetford on the occasion of the holding in Norwich of the annual conference of the Federation of Master Printers and Allied Trades of the United Kingdom of Great Britain and Ireland, the Federation has just presented to the Dean and Chapter a beautifully-printed copy of the Bible for use in the Cathedral. The Book is richly bound in red morocco leather with gilt embellishments. The inscription reads as follows: "Presented by the Federation of Master Printers and Allied Trades of the United Kingdom of Great Britain and Ireland to the Dean and Chapter for use in the Cathedral Church of Norwich in grateful recognition of a sermon preached by the Lord Bishop of Thetford, on the occasion of their annual conference, on Sunday, May 25, 1924. Signed: H. Rivers Fletcher (president of the Federation of Master Printers and Allied Trades of the United Kingdom of Great Britain and Ireland), R. A. Austen-Leigh (president of the East Anglian Alliance of Master Printers), and W. T. F. Jarrold (president of the Norwich Master Printers' Association)." The Bible was printed by W. Lewis at the Cambridge University Press.

William Blades' Centenary

Appreciation by Professor Pollard

WILLIAM BLADES was born at Clapham on December 5, 1824. The centenary of his birth was quietly but very enthusiastically celebrated in London. An exhibition of his chief writings was arranged in commemoration of this event. In this connection a brief but admirable sketch of Blades' life and work was prepared by Mr. W. Turner Berry, and this prefaced a catalogue of the exhibition compiled for the Governors of the St. Bride Foundation Institute.

From this article of Mr. Turner Berry we find William Blades received his youthful training under the Rev. Charles Pritchard at the Stockwell and Clapham Grammar Schools, and on May 1, 1840, was apprenticed to his father, Joseph Blades, a respected city printer, of 11, Abchurch Lane. He was required to fulfil in their entirety the covenants of his indentures, working side by side with his father's employes and receiving a training which in after life proved of such inestimable value to him, not only as a master printer, but also in the various fields of bibliographical research which made him famous. Soon after the termination of his seven years' apprenticeship he was admitted a partner. The firm, which had up to that time been Blades & East, was then changed to Blades, East & Blades, under which name it has remained to this day. While still an apprentice he commenced the formation of a library, and devoted his leisure to the study of the history of the printing craft. It was only after some years, however, that the special interest he was taking in William Caxton became known to the general public by the issue of introductions to reprints of The Governayle of Helthe and Morale Proverbes, which works were published at a period when his great monograph on Caxton was in active preparation.

THE LIFE OF CAXTON.

To the preparation of his great work, The Life and Typography of William Caxton, Blades devoted a remarkable amount of patience and enterprise. Having satisfied himself that many of the accepted authorities were incorrect he plunged resolutely into an independent enquiry, taking nothing for granted upon the authority of high names, but diligently travelling over the ground previously trodden, observing many things unnoticed by his predecessors, and ultimately amassing an amount of information and material which no former typographical student had ever succeeded in bringing together. Having thus traced the records of Caxton step by step and established his typographical connection with Colard Mansion, the printer of Bruges, he entered on a minute examination of the types, first at the Bruges press and subsequently at the press at Westminster. He minutely examined first-hand every available specimen of Caxton's handiwork to be found in the Netherlands, France, Germany, and his own country. Each specimen was carefully collated and the size, style, and condition of the type closely studied. In this way he was able to determine the proper sequence of undated books, and ultimately to present to the world a result which embodied a thoroughly scientific study of typography. The first volume was published in 1861 and the second in 1863, and in 1877—the year of the great celebration—the work was corrected and published in one volume under the title of The Biography and Typography of William Caxton, England's First Printer.

His other writings are too numerous to mention in detail, but passing reference must be made to his Enemies of Books, which ran through seven editions.

THE BEGINNING OF TYPOGRAPHY.

The rival claims of Holland and Germany as the birthplace of printing with moveable types naturally interested him. In 1870 he expressed his own opinions in Early Schools of Typography, where he suggested the possibility of an independent invention in both countries, but showed that the Caxton printing pedigree must be traced to a Dutch rather than to a German source. In the following year, however, when Dr. Van der Linde's Haarlem Legend was translated into English by Dr. Hessels, he evinced sufficient sympathy with " that destructive essay against the claims of Haarlem " to print it at his own cost. In the subsequent development of the controversy he found himself unable to follow the extremists of either party who waged a " wordy war " for several years, and in his paper before the Library Association in 1887, and his article De Ortu Typographiæ which appeared in The Bookworm the year following, it is evident from his summary of the case that he had reconsidered the statement implied in Hessel's treatise, and was again more in favour of the claims of the Dutch.

His success in business and in literature bears testimony to his energy, enterprise and ability. His personal qualities of uprightness and kindly dealing, combined with his unswerving devotion to his life aims, established his reputation as a fine example of the type of scholarly men of affairs for which the City of London is justly famous. He died on April 27, 1890, at his house in Cheam Road, Sutton, after a fortnight's illness, and his remains were laid to rest in Sutton Cemetery on the very day he would have completed his jubilee as a printer.

FOUNDING OF BLADES' LIBRARY.

As previously mentioned, Blades commenced the formation of his library before the termination of his apprenticeship, and was constantly adding to it to the end of his days. It was selected with much personal care and patience; only those works in which he was directly interested being admitted on his shelves. His interest in various special fields of historical and bibliographical study obviously influenced him in his search for books, and in consequence his library is rich in such subjects as the invention controversy, typefounding, practical typography, plays and poems on printing, etc., but it also included a representative collection of works on the antecedents of printing, origin and history of printing in all countries and its practice in all branches, including lithography, bookbinding, and other allied subjects.

Blades also amassed a unique collection of medals and tokens relating to printers and printing, details of which will be found in his work, Numismata Typographica. These medals were on exhibition at the Caxton Celebration, and the majority are now in the museum of the Guildhall, where they may be seen on request. He also brought together many rare portraits of printers and typefounders which are in the St. Bride collection.

ACQUISITION BY ST. BRIDE'S.

A few months after the death of Blades it was announced that his library would probably be sold in the coming spring, and thereupon Mr. C. J. Drummond wrote to Mr. Alfred F. Blades, one of the executors, proposing that it should be kept intact in view of its possible purchase by the governing body of St. Bride Foundation, a body which, although its formation was authorised, had not then been elected. Mr. Alfred F. Blades replied expressing the pleasure the executors would feel if the library could be purchased as suggested, and in the following January an informal meeting of the co-optative trustees of the Foundation was held to give the matter consideration. As a result of this meeting a deputation was appointed to inspect the library, and at the first meeting of the newly-elected governors, which was held on April 8, 1891, the purchase of the Blades collection was immediately dealt with, and it was resolved that, subject to the sanction of the Charity Commissioners, the offer of Blades' executors to dispose of the books at a valued price of £975 be accepted. The Charity Commissioners agreed, on condition that the governing body contributed £500 out of the funds of the Foundation, the balance to be raised by donations from outside sources. This balance was eventually obtained and the purchase of the library completed.

The Centenary Exhibition was opened at St. Bride Foundation Institute on December 5, when a very representative number of printers were present.

The Rev. A. Taylor, in opening the proceedings, paid tribute to Mr. C. J. Drummond, who had been instrumental in securing the William Blades library for the St. Bride Institute.

PROFESSOR POLLARD.

Professor Pollard, M.A., C.B., then said:—It is a great satisfaction to me that this exhibition is being held here to celebrate the centenary of Mr. William Blades. As far as I know it is the first occasion on which the centenary of a bibliographer has ever been celebrated, at all events here in England. I do not think it would be quite fair to say that the reason it is the first centenary of a bibliographer in England which has been observed is that Mr. William Blades was the first bibliographer that England has ever had. That comes very close to being the truth, but I think we should always agree that if anybody had thought of it, it would have beet a fitting thing if the cenetenary had been observed of Joseph Haines, the author of "Typographical Antiquities." He was born in 1688, and he died in 1759, and his great book saw the light in 1749. An even greater man than Haines was William Herbert, who trebled the size of Haines' book, and considerably more than trebled its value. His edition was produced in 1785 to 1786 and 1790. Since Herbert I do not know of anybody at this moment whose centenary I should have attended with any great enthusiasm until we come to William Blades. And perhaps there is a reason why our ancestors did not have centenary celebrations either for Haines or Herbert. I was reading an article in the Dictionary of the National Biography, and I rather gathered that both men on the human side were not the sort of persons about which it was very easy to be enthusiastic. Now in Mr. Blades we had a man who was not only a fine bibliographer, but also a fine man. And as this is the first centenary as far as I know of a bibliographer which has ever been held in England, it is a great thing that we have both a fine bibliographer and a fine man to be the subject of our praise.

NEED FOR SUPPLEMENTING BLADES' MEMOIRS.

The only memoir of any importance at all of William Blades which has up to the present appeared is a brief sketch of him which is prefixed to "The Pentateuch of Printing," which was written by Mr. Talbot Baines Reed, who had a great admiration for him, and nothing could be better than the tone and temper in which it is written. At the same time I do myself feel very strongly that there must still be people here who would be able to supplement that very brief memoir, and I do hope that before it is too late that will be done. The tone and temper of Mr. Reed's brief memoir are everything that could be wished, and there is in it a paragraph which I think anybody who has read it must find absolutely unforgetable. Mr. Reed tells how the first occasion on which he met Mr. Blades was amid the turmoil of the final arrangements of the Caxton Exhibition of 1877. Everybody knows what an exhibition is like a few days before it is opened, and there he was—William Blades—in his shirt sleeves unpacking a box of CAXTONS. He was the moving spirit of the scene. Others were in despair at being up to time, but he kept his head and worked hard. Whilst others argued he was serene, and it was impossible in his presence to stand idle, or to doubt for a moment of the success of the undertaking. How complete was his success need not be told here, or how modest was the share of credit which he took to himself. I think that is a most admirable sketch, and although that is so I think it highly desirable that Mr. Reed's memoir should be supplemented. I think you will agree that in that paragraph he went to the root of the matter.

THE BIBLIOGRAPHER.

As a bibliographer, Mr. Blades had the great advantage of being a practical printer. He was not afraid of looking any font of type in the face, and I am under the impression that until he came on the scenes bibliographers in general had been very much afraid of type. They had preferred to pursue their study of the manuscripts. They got a general impression, they took a glance at a thing, and then began to talk about it. Blades' idea was to study the types, and he began his labours on Caxton by finding out as far as he could see what types Caxton had used. It has subsequently been discovered that he had a handful of the type of the few different sizes which have been signified as used in the bulk of Caxton's books. Having established these half dozen types he proceeded next to find the books which Caxton had printed. And having the types and plates he sorted out the completed books ac-

cording to the types, and there he had in outline the story of Caxton's typographical career. Then he proceeded a little further and looked for signs which would help him to group the books. He began to see whether the ends of the lines were even or uneven. He began to enquire whether any given book had signatures in it, how many lines of print he was placing in his folios, and what was the breadth of them, and when he had got together all these little indications, the books he had previously arranged in a species according to their types, he was now able to group afresh under their sub-species, which were in the supplementary characteristics. It seems a perfectly obvious and simple thing to do. The fact is he was the first man in England at all events into whose head it had come. He thought that was the proper method of procedure, and when it had been explained to people it took some fifteen or sixteen years, I think, before that comparatively simple idea came into practical use for any other books.

A LANDMARK.

It was because Blades' "Life and Typography of William Caxton" was the first book in England in which that method was pursued that it constitutes a land mark in the history of bibliography here in England, and I am not certain it is not really a land mark in the history of bibliography in the whole of the world. Blades did a great many other things besides writing that book of his on The Life and Typography of Caxton, which has almost become a classic. He also published a list of type specimens which Hope would not have thought anything of in his days, but which everybody to-day is engaged in hunting after, and he held extremely sound views about the origin of printing. But his greatest book is that book of his on Caxton, which revolutionises the methods of bibliographers, and for that reason all bibliographers in all ways hold his name in honour, and I am glad this exhibition has been arranged here, and this audience has come together to pay tribute to a man who so richly deserves every honour that can be paid him.

MR. C. J. DRUMMOND.

Mr. C. J. Drummond, after reading a letter from Mr. Alfred Blades, who expressed regret at being unable to be present, and hoped that the library would keep his father's name alive, said he had been looking at the list of donors when the governors of St. Bride were able to take over the library, and he found that not one of the individuals were in the land of the living. He met Mr. William Blades first under somewhat hostile circumstances, but the result was they remained great friends until the day of his death. He was a lovable man in the best sense of the word. He thought it a little unfortunate that no one had taken up the task where he left it, and he hoped that day might have the effect of finding someone able and willing to continue the good work. To his mind the technical library they had there was really the jewel of the Foundation. There was a time when they were proud of having a printing school, but that unfortunately they no longer had, but they still had this very beautiful technical library, and so far as he was able to judge, he did not think there was any other library quite comparable to it. It was desirable that anything that could be done should be done to keep it up-to-date as far as possible.

SIR ROWLAND BLADES.

Sir Rowland Blades said it was difficult to speak of his late uncle. It was difficult to speak too highly of that delightful personality, after the beautiful words of Professor Pollard, the outstanding literary personality of our time. It was a great honour to have him there, and they did feel as a family the very great honour paid to his late uncle. Personally, the recollection of his uncle was so fresh that it was difficult to appreciate that they were celebrating the centenary. He remembered him in his earliest days, and until his death, when he was twenty-two, and during the whole period he looped up to him with the utmost affection, regard and respect. He had the most lovable disposition, he was always kind-hearted, and his many gifts and abilities roused the admiration and even the despair of those who attempted even to equal them. He did not know whether in the old days grammar schools gave boys a more thorough education than the present day, or whether more time was spent or whether the lads were able to absorb the education, but he could hardly realise, the few years his father and uncle had at school, that they should have mastered and achieved such a wonderful capacity as far as literary work was concerned. They were masters of the classical writings and were well acquainted with the modern writings, and although they left school at an early age, they seemed to have got that thoroughness which they did not seem to meet in the present day, and as far as he was concerned, and his cousins in the room were concerned, they really looked with despair on the height won by their parents, and felt with despair that it was impossible to achieve anything like the great accomplishments they arrived at with so little opportunity. His uncle must have left school at the age of 15, and his father about that time, and in those days he did not think the eight-hour day was recognised, and he knew they went into the business and worked hard. He knew his uncle did. His father, on the other hand, was more anxious to see the world, and threatened to run away unless he went to sea. His father went to sea, and afterwards came back to the business, and was able to carry on the business while his uncle was travelling in all parts of the continent in order to get information on the great subject in which he was interested.

He did not know whether it had ever been mentioned, but years ago his grandfather managed to save the life of Rowland Hill, the great preacher, by taking him inside his gate and protecting him against a crowd. His father had been named Rowland Hill Blades after that great preacher.

He would like to say again that they did deeply appreciate that his uncle's memory was honoured that day. Those of them who had lived with and loved him would always remember the friends who assembled to do honour to his memory.

The Chairman expressed on behalf of those present their deep indebtedness to Mr. Pollard for being present, and also their thanks to Mr. Turner Berry for the painstaking work he had done in connection with the celebration.

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My Recent Trip to America

By F. W. BRIDGES

THE three months' trip to Canada and the United States from which I have just returned, although not altogether undertaken in the interests of the printing trade, afforded me many welcome opportunities to get into touch with some of the leading members of the craft, and to see something of their work and their premises.

I think I might say at the outset a word or two about trade organisation. I had the pleasure of visiting the headquarters of the United Typothetæ of America at Chicago, where I met Mr. Edward T. Miller, the General Secretary, who received me very cordially and introduced me to many of the Heads of the Department. The Typothetæ is now housed in palatial offices, and seems to undertake very much more work on behalf of its members than our own Federation attempts. In particular they have a Research Department, directed by Dr. Francis H. Bird, and this department undertakes an enormous amount of work which saves the individual much time and trouble.

At Washington I was the guest at the weekly luncheon of the local Typothetæ. This lunching institution is much more than a mere gathering together of friends socially. It struck me as a very businesslike arrangement. Printers meet together for frank discussion. On this particular occasion they were talking about Sales Management, and I felt that many of those present were bound to be greatly helped by the things said. I had the opportunity at that lunch of saying something about the importance of our craft, its important place in civilisation, and the responsibility which rests upon us of seeing that its ideals are kept high, and that the best possible education be given to those who do its work.

While in Washington I had the pleasure of renewing my acquaintance with Mr. George Carter, the Government Printer. He showed me every kindness, took me over the huge establishments which he controls with its staff of over four thousand. I was able to see much Government printing in process, and I had lunch in a remarkable Cafeteria, which is a Recreation Association run for the benefit of all the employes. Mr. Carter and his work have so recently been dealt with in our pages that I content myself with expressing great admiration for this gentleman's executive powers, and marvel at the perfection of the organisation of such a huge establishment.

Certainly one of the most interesting of my visits was that paid to the offices and works of the Mergenthaler Linotype Company at Brooklyn. Here I met Mr. Philip T. Dodge, the president of the company, and Mr. R. W. Orcutt, the general manager. Both these gentlemen were interested in anything I had to say about the condition of things in the home country, and I was delighted to have the opportunity of speaking in high terms of those gentlemen who are so well known to me in this country who maintain the great traditions and carry on the important work of the Linotype Company. Mr. I. F. Scheeler showed me over the wonderful works. I must not attempt to describe them. It would take a book rather than an article I was delighted with everything I saw, and came away full of admiration of the brain power and personality which are behind this great organisation.

Another great pleasure to me was my visit to the wonderful works of Donelley's at Chicago. This is certainly one of the sights of America, from the printer's point of view. I went over these wonderfully-equipped offices, and was struck most of all by the apprentices' school. Here is an absolutely well-equipped educational establishment where youths are given a large amount of time to continue their studies to pursue the theoretical side of their craft, and thus equip them for their future work. I had an interesting talk with the Principal of the school, and was able to tell him something of the work we attempt on similar lines in this country.

In Philadelphia I visited the world-famous offices of the Curtis Publishing Company. From this office The Ladies' Home Journal, The Saturday Evening Post, and The Country Gentleman are issued. The two former journals are well known in this country, The Ladies' Home Journal running into an issue of well over 2,000,000, while The Saturday Evening Post has a circulation of 2,600,000 copies per week, and the number I saw upon the press was being printed for publication three weeks afterwards. I believe the printing of The Ladies' Home Journal has to be undertaken very much earlier than that in order that copies may be ready for the day of issue. It may be interesting to some of our readers to know that about £1,750 per page per issue is paid for advertisements in The Post, and about half as much again for The Ladies' Home Journal. All material for advertisements has to be in the hands of the publishers in the case of colour work three months before publication, and for black and white five weeks in advance. So huge is the circulation of the Curtis journals that the Post Office authorities have to be housed on the premises themselves, where they have a staff at work arranging and despatching the various publications. The general offices of this company are most palatial, with fountains, mosaic floors and frescoes. We certainly have nothing to compare with this in the Home Country.

Amongst other printing offices I visited was that of the Fuchs & Lang Manufacturing Co., New York. This house is celebrated for its beautiful colour work, and I was able to bring away with me some of the latest of their offset productions, which shows what progress is being made in this department of the industry.

I was greatly impressed by the feelings of cordiality toward this country expressed on every hand. There is little doubt that our credit stands higher in America to-day than ever it did, and those in this country like our friend Mr. L. G. Sloan, who have been labouring so whole-heartedly for an improvement in the relations of English-speaking peoples, have every reason to be proud of their labours.

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THE CAXTON MAGAZINE
A PROGRESSIVE ORGAN OF THE GRAPHIC ARTS
Edited by A. E. OWEN-JONES

The Trend of Photo-Engraving and Photo-Offset Printing

Important Lecture by Mr. William Gamble

MR. W. GAMBLE brought the printing trade into further indebtedness to himself by a most informative lecture delivered to a large audience in the Stationers' Hall on January 7, under the auspices of the London Central Districts Master Printers' Association.

Before the lecture there was an exhibition of lithographic and other printing demonstrating the trend of modern printing, and showing the rapid progress being made, particualrly in photo-offset work. These specimens were lent by the following:—The Government of India; Charles & Read, Ltd.; the Clifton Studio; David Allen & Sons, Ltd.; Johnson, Riddle & Co., Ltd.; Fuller's Studios; Vincent Brookes, Day & Son, Ltd.; Lowe & Brydone (Printers), Ltd.; Blades, East & Blades, Ltd.; Paul Fischer; G. R. Hildyard (Wharfe Litho); John Swain & Son, Ltd.; Suttley & Silverlock; the Engravers' Guild.

Mr. G. Eaton Hart, who presided, said: Our lecturer to-night scarcely needs any introduction from me. His voice has been heard in this hall many times, and his reputation is known throughout the printing world, particularly in regard to photo-litho, offset, and photogravure. I do not think we want much more information upon Mr. Gamble's knowledge than to look at the Process Year Book which has been published under his editorship for so many years, and I think this year's volume simply superseded itself in the quality and value that it has in regard to the photographic principle. The air is full of new inventions, and there are rumours of all kinds of inventions in the photographic principles of photo-litho and photogravure, and I think it is only due to the Central Association that they should have the merit of some gratitude in regard to the lectures which have been arranged to be given in this Hall in connection with the Central Association. The last lecture, you remember, was on Collotype, which is one other branch of this science, and we have the gratification of having that lecture reprinted and in the hands of all the members, or at least broadcast to the general printing trade of London.

I can only hope that this lecture here to-night on this very important question will be similarly treated. Offset probably is more vitally connected with the letterpress department of printing than anything else besides, and it has become more and more connected and intermixed with it. As a matter of fact, there is a very great difficulty for the expert letterpress printer in regard to the production from the process of offset to know whether he is looking at a direct letterpress impression or whether he is looking at an offset impression, and it is only by most expert men that the relationship between the two can be discovered. The advances and development of the offset have undoubtedly created a revolution in our craft. When you consider the short time that the offset principle has been established, the progress has been most marked and most wonderful, because it is, I believe, only about twenty years ago that the principle of offset applied to paper was established, and it is only within the last year or two that these marvellous improvements have taken place by which we can obtain such samples of printing as you have been looking at. The advance is simply wonderful, and the revolution it is going to cause most remarkable. Of course, offset printing affects the product in the way of cheaper paper; it affects it in the way of the absence of all blocks; less ink is used; coated paper, which has given letterpress printers so much trouble, is very much obviated; and that great bugbear—the set-off—is removed by the transposing of the two words—offset and set-off—so that the advantages are apparent to every one of us who has had any experience in printing. You have already seen the exhibits. Most of you are conversant with the progress offset has made, and the large attendance only proves the interest which is felt and must be felt in regard to this process.

Mr. W. Gamble said: A little more than two years ago in this hall I gave a lecture on "The Influence of Photo-Offset and Rotary Photogravure on the Future of Letterpress Printing." In that lecture I indicated the effect which composing without type, by the aid of photographic processes, would have on letterpress printing. I tried to show that the tendency would be to drive printing towards offset and photogravure. My remarks were received with some scepticism on the one hand and with some degree of alarm on the other. I fully expect to be reminded that nothing has really happened to cause alarm. You may point out that letterpress printing and block-making seem to be still going along with apparent prosperity, that typefounders appear to be doing pretty well, that mechanical typesetting machines seem to be as largely and increasingly used as ever, and that printing machine builders are evidently quite optimistic as to the future prospects of business. Thus I am afraid you will regard me as a prophet whose predictions are not very trustworthy. Did I not say, you may ask, that photo-composing was bound to come, and that it might take only five years to develop into something useful? Here are more than two years gone, and how far have we got?

I am quite prepared to believe that such thoughts are in your minds, and I want to say at the outset

that, though the photo-composing idea has not yet been fully realised, a good deal has been done towards it in these two years. You have had described to you by other lecturers in this hall machines which are already in existence carrying out the idea of photo-composing, and which show great promise. If these machines are not yet perfected and available for the use of the trade, it is not the fault of the inventors, but simply due to lack of means or want of enterprise on the part of manufacturing firms who ought to be in the forefront in developing an idea which will undoubtedly be realised in time, and which when consummated will have a very great influence on the printing industry.

In spite of this lack of encouragement, I know there are a number of inventors at work in various countries on this problem, and if only as much work as has been done in the past two years is applied in the next three, we may expect to see something like a practical solution within the five years I gave for its accomplishment. So radical a change as this must necessarily be a matter of slow and progressive development from one improvement to another, just as was the case in mechanical typesetting. I am convinced that text composing without type will come in some form or other. The need for it is becoming more and more insistent as offset and photogravure develop. No one can dispute that these processes have made great strides in recent years, and they are destined to go a good deal further.

In my present lecture I want to indicate what is the trend of photo-engraving and photo-offset printing, ignoring for the moment rotary photogravure, because that would widen the subject beyond the limits allowable for this lecture, and because I understand that another lecturer will shortly deal with this subject.

THE INFLUENCE OF OFFSET ON BLOCK-MAKING.

First, I want to deal with the influence of offset on block-making. Is offset printing, with the aid of photo-process methods, seriously affecting the output of the photo-engravers? I do not think it is. There are photo-engravers who have opened departments for offset plate-making, but have not found that the block-making side of their business has suffered. Whatever work offset printers are doing by the aid of photo processes seems to be for the most part additional to the demand for blocks, though I do not think it is an increasing demand.

There may be a few instances where a book is reprinted by photo-offset, and if there are illustrations in it the block-maker loses to that extent; but probably the book never would have been reprinted but for the cheaper processes employed for its production. The block-maker could never hope to compete with the Manul, the Wincor, the Novographic and similar processes, in laying down the reprint of a book. He could never hope with camera methods to compete with processes which can be done without the camera and with comparatively unskilled labour. There is a good deal of this reprint work being done, which is so much extra work for the lithographic printer, but is entirely outside the province of the photo-engraver. If it is affecting anyone, it is the book printer, for he cannot hope to compete when books can be reprinted at a cost, including the paper, which is less than the expense of the type-setting, even when mechanical composition is employed.

There are also cases where catalogues containing halftones have been done by offset because the customer has preferred the method, either as a novelty or because he liked the effect better; but I have not heard it claimed that such catalogues have been produced more cheaply than by blocks and letterpress printing.

It does not by any means follow that in every case photo-litho plates will be produced more cheaply than blocks. It is quite possible to take some job done by photo-offset and find that the cost of laying down plates with mixed line and halftone illustrations and text will come out higher than if done by block and letterpress, taking each kind of work at standard rates. In one case I investigated, the blocks would have cost £16, and the litho plates came out at £25. The cost of ink and machining would be no less in litho, though there might be some saving in make-ready, and a cheaper paper could be used.

Probably the reason why offset printing is not making greater inroads in the block-makers' business is that offset plate-making is not yet quite such a sure thing as photo-engraving. There are many pitfalls and difficulties, and often jobs come out far from satisfactorily. Those who are engaged in this work are groping slowly and painfully, with much unproductive expense, to discover the most reliable methods for obtaining successful results every time.

You must bear in mind that photo-litho is still in its infancy, whilst photo-engraving is nearing its prime. When the younger process has had as many years of life, we may look for far greater accomplishments, and we may even find that it has outdistanced anything that has been done up to now in block-making, especially in halftone and colour work.

LIMITATIONS OF OFFSET FOR HALFTONE REPRODUCTION

No one can say that the offset halftone work shown up to now has equalled the clean and effective quality of letterpress halftone. In the best of offset halftones there always seems to be something wanting; they are mostly flat, grey, and lacking in detail. The reason is that the halftone process has limitations which are very obvious when it comes to be applied to offset printing. The photo operators no doubt get just as perfect negatives as those for block-making, and the printing-down on to the metal is just as sharp; but when the plates are put on the machine the prints appear flat, grey and woolly. Why is that so? I believe it is due to a conflict between the two processes, which do not seem to agree well with each other. The halftone theory demands that the dots should be absolutely black and sharply defined against the whitest possible paper to get the most perfect result. But the offset printer asks for a coarsely-grained plate to suit machine printing conditions. This results in the dots being partly out of contact when printed down from the negative, and as a result they print ragged, some dots being missed altogether. Again, the offset printer firmly believes that he can improve a halftone print by washing-out and inking-up again. He also believes in the efficiency of various "dopes" and "etches" as an aid to getting clean prints, yet this treatment is usually fatal to the work of the process man. Printing on matt-surfaced papers is also against getting crisp halftones.

Until a process can be found in which the image on the offset plate is as durable and as clean-edged as the fish-glue enamel image on copper blocks, there is no hope of offset halftone being much better than it is. When "dry litho" is really achieved, good halftone offset printing should become easy. There is a process now being successfully worked in America called "Aquatone," which seems to approach the ideal requirements. The plate is prepared in much the same way as in collotype, but on zinc instead of glass, and the gelatine used for forming the image is not dissolved away from between the dots or lines; on the contrary, it is hardened so that it forms a film which is receptive of water, but repellent of ink, and it also prevents oxidation. It is said that a quantity of ink can be deposited on the image which would be impossible with other processes, thus permitting a greater speed in printing than in ordinary litho work. It is claimed that 3,600 per hour is regularly attained. Halftones as fine as 400 lines per inch can be printed, or grained images as fine as 1,200 to the inch. This is evidently the kind of process offset printers want.

The photo-engraver discovered twenty-five years ago that halftone images developed with transfer ink did not yield the sharpness required for the best results, yet offset printers go on using this method, and fail to see that it is one of the principal reasons why their work is not as clean as the blocks.

There are several inventors at work on the idea of making halftone offset plates of better quality and easier to print. Mr. Ronald Trist claims that he has done a great deal in this direction, but is not yet prepared to publish particulars of his methods.

In my opinion "dry litho" accomplished by modification of the ink will not be sufficient until plates can be made that will not fill up and thicken in the course of printing. Years ago the Wharf Litho process, invented by Mr. G. R. Hildyard, was introduced, and, to my mind, this process came very near to the realisation of what is now required; but the process was exploited at a time which was too early for it to be properly appreciated. It could now be revived, and in the light of our present knowledge might prove very useful. I recently got Mr. Hildyard to make me some plates by his process, and they printed very well on a letterpress machine. Wharf Litho was in one sense of the word a "dry litho" process, but it did not require any special ink, nor anything but ordinary composition rollers. The plate was slightly etched into relief, and there was a peculiar grain in between the work which gave an ink-repelling quality to the plate without any damping.

The feature of Wharf Litho that made it most interesting was that you could print litho work on letterpress machines, and I want to emphasise the importance of these "dry litho" methods for letterpress printers. Do you realise that if litho plates can be made so that they have an unchangeable print on them, and so that they do not require damping, you may be able to print them just as well on letterpress as on purely litho machines? With improved methods of laying down the work quickly and cheaply on such plates, it will be unnecessary to put type formes on the machines, and there will be no making-ready to do. Then you can snap your fingers at the litho offset printer, and, come what may in photo-composing machines, you will at least not have to scrap your printing machines. So there is a ray of hope, a rift of blue sky, for the letterpress printer after all.

POSSIBILITIES OF GRAIN PROCESSES.

As I do not think it will ever be possible to get offset-printed halftones to look as crisp and clean as letterpress from blocks, offset printers might do better to turn their attention to perfecting processes of making grained images on the litho plates instead of using the halftone screen. In this way the print would correspond more closely to the character of the grain on the plate. Re-touching could then be done with the lithographic crayon without such work appearing too evident. The irregular grain would suit the matt surface of the paper, and any slight spreading or filling up would not show so badly as it does with halftone.

It may be that some of you have tried grained screens, and have been disappointed with the result. Probably the reason is that you have not carried your trials far enough. The proper use of grained screens has to be learnt by long experience, and when as much thought and time has been given to the subject as to ruled screens they will be better appreciated and more extensively used. Further, I must remind you that there are various kinds of grained screens, and it has yet to be discovered which is the most suitable. There is the Metzograph screen, which I consider the best of all; but, unfortunately, the inventor and maker is dead, and the manufacture has not been continued. There are a few of these screens still available, and no doubt many process shops have one or more put on one side and never used. These might well be brought out and tried again.

Besides the grained work produced with screens there are numerous processes for forming a grain on the plate, and these are capable of yielding very good results. Some of you will recall to mind the Pretsch, the Dallas, the Frey, and other methods which have been put forward and are now almost forgotten. Probably, some day, one or other of these old processes will be dressed up in modern clothing and exploited as a new process, to be hailed as the very latest idea. Some firms will no doubt foolishly pay a big fee for the secret, when they might just as well dig up the process for themselves in the back numbers of trade journals or in old lithographic books—or they might well draw on the memory of some old worker.

Grained work does not seem to be suitable for block-making, as it is so difficult to retain the finer grain points in etching, and the effect is, therefore, coarse; but for lithography grained work is ideal. I wonder it is not more used, and I would certainly recommend you to look up and study these old grain processes.

Whether you use grained screens or ruled screens there is an absolute necessity in lithographic work for what are termed high-light effects. What is meant by high-light is this: The block-maker must get clearly-defined dots all over his image, his rendering of the tone values being by means of larger or smaller dots. In the whites or high-lights he aims to have very fine dots on the plate, as he must support the ink-rollers and the paper in printing; but the lithographer is not tied down to any such necessity, and can therefore have high-lights without representing them by fine dots. If he follows the block-makers' methods he will get a flat result, for the dots are bound to spread somewhat, or some of the finer dots may disappear altogether, giving a crumbly effect. Moreover, the

lithographer cannot do anything on the plate equivalent to fine etching as done on blocks. The lithographic negative maker must accordingly make a more contrasty negative, and the best kind is that known as the "high-light." In this case the dots in the high-lights of the negative are closed up until no dots are printed through on to the zinc, and the shadows must print strongly. Between these two extremes there must be perfect gradation of tones. Such an effect is not easy to obtain. In closing up the high-lights of the negative there is a danger of lowering the values of the middle tones, and making the shadows print too grey. Some operators are more successful than others in effecting the necessary compromise, but I do not think anyone can claim to be able to make the perfect high-light negative for lithographic printing every time, especially as the conditions vary with every original.

The late Mr. Frederick Sears was a master in securing high-light effects, and, though his methods are known, there are few who can equal his work. The drawback of his method was that three plates had to be made for every print or every colour, so that on a five-colour job there would be fifteen plates to make—with fifteen chances of going wrong, either in register or in tone values. To-day high-light effects are got by suitable choice of diaphragms and by screen distancing.

With the grained plate methods, such as that of Frey, the high-light effect is got naturally, because a continuous-tone negative is used—that is to say, there is no screen in the negative.

Processes have been proposed for getting high-light effects by removing the screen during part of the exposure, or by having some clockwork or electric-motor-driven mechanism to open the diaphragm gradually. Dr. Albert, of Munich, introduced over here, years ago, a method of superimposing a positive over the negative, and printing through the two together, the positive serving as a mask to cut out the parts not wanted in each plate. A special printing frame and special arc lamp had to be used, and the process was found too troublesome to be practical.

The Bassani process, which is now being demonstarted in Paris, consists in having a mechanical device in the camera to move the screen in a small circular path. This has the effect of spreading the light action which forms the dots and brings about the closing up of the high-lights. One cannot help thinking that this spreading must equally affect the middle tones and shadows.

No doubt in time some standardised method, suitable for lithographic work—perhaps through a modification of the screen—may be worked out. Every-day practice is the best teacher in these matters.

INSUFFICIENCY OF TRI-COLOUR FOR LITHOGRAPHY.

The difficulties met with in making negatives by the halftone method for black-and-white lithography are increased tremendously when colour separations have also to be made. Not only has the operator the greater difficulty of securing clear printing negatives on dry plates than on wet plates, but he has to keep in mind the necessity of getting proper colour selection and good register. It does not seem possible to get effective litho work in only three colours produced directly from the original, and most firms resort to five or six printings. The reason is, mainly, that it is not possible to obtain perfect colour separations in the negatives, and there is no adequate means of making corrections as there is in the case of fine etching. Even when the best photographic result is obtained there is too much risk of the colour values altering in the machine printing. With two or three extra colours to work with, the defects of the primaries can be remedied, and the necessary grey light tints can be obtained as well as the full strength of the solid colours. Whatever success is obtained in photo-litho colour work is only by dint of an immense amount of labour in re-touching, so that many jobs cost as much as if drawn by hand. Sometimes it is found best to put down some of the plates by photo methods, and draw in the other colours by hand with the aid of "set-offs."

It may be that this difficulty of doing process colour work by litho printing is due to the inadequacy of the three-colour method. It is perhaps a bold thing to say that the three-colour theory is all wrong, as Mr. Zander, Mr. Bawtree and others have done. They claim that there must be four colour separations and four printings. The idea of adding a fourth printing is as old as the tri-colour process, but the fourth printing suggested is usually a black or grey. Mr. Zander's Complementary Colour Process consisted in modifying the red, yellow and blue inks, and adding green, which also involved altering the filters. Mr. Zander's claim was that he secured a purer representation of such colours as magenta, purple, emerald green, ultramarine blue and violet, which are imperfectly rendered or not reproduced at all in the three-colour process.

In the current volume of Penrose's Annual there is an article by Mr. A. E. Bawtree, illustrated by an example of what he describes as "A Revision of the Principles of Three-colour Halftone Reproduction." Mr. Bawtree claims that the principal cause of inefficiency of the three-colour process lies in its being founded upon incorrect principles, and he explains his reasons for that conclusion in the following way: It is customary to arrange the colours in the form of a circle of six divisions, violet, green and red being placed at angles of 0, 120, and 240 degrees respectively. These are the colours of the filters. Between them are placed blue, yellow, and magenta at angles of 60, 180, and 300 degrees, these being the colours of the inks to be used. It is known that violet light mixed with green light yields blue light; also that violet light added to red light yields magenta; and it has generally been accepted that similarly green light added to red makes yellow. The principle of the three-colour process consists in taking the image through violet, green, and red filters, and printing the impressions with inks of hues diametrically opposite to these colours in the circle. Now, recent researches have shown that whilst it is true that the stronger and purer are the violet and green the deeper is the blue produced by the combination, also the stronger the violet and red the deeper is the resulting magenta; nevertheless, when the green and red are similarly strengthened the resulting yellow is really paler, until a point is reached where, with very pure colours, white light is yielded and not yellow at all. Yellow, therefore, is as much a primary colour as violet, green and red, and a different colour circle must be adopted. This requires to be divided into eight segments, with violet, green, yellow and red at angles of 0, 90, 180 and 270 degrees respectively, and between these are blue, citron, orange and magenta respectively, at 45, 135, 225 and 315 degrees. Since it is essen-

tial for the subtraction process of colour printing that the inks should reflect two colours each, these latter four segments of the circle must be adopted for the ink hues; further, as it is also essential that the filter colours should be those diametrically opposite the inks, an entirely new set of filters must be used.

Mr. Bawtree has worked out the necessary inks and filters to comply with these conditions, and several firms have taken up the new process; but it has not yet been sufficiently put into practice to enable its possibilities to be fully demonstrated. The original which is reproduced in Penrose's Annual was selected by a leading colour printing firm as being the most difficult it would be possible to find. I think you will admit that the picture has some good qualities, whatever faults it may have. I have not had time to go more fully into this process, and I prefer to reserve final judgment on it until it is fully tried out, but the arguments for it seem very convincing.

Anyone who wants to study this question of three-colour versus four-colour can do so in Von Hubl's work on "Three-colour Photography."

REGISTRATION DIFFICULTIES.

One of the greatest difficulties in utilising photo-processes for lithographic colour printing is that of securing good register, and the difficulty is intensified with the number of colours to be printed, as well as by the number of repeats to be put down on the sheet, for there are so many chances of going wrong. The lens may not be perfectly colour-corrected; the colour filters may introduce errors; the camera may be out of parallelism in itself or with the copy-board. Even when perfectly fitting negatives are obtained there are further troubles in printing down on to the zinc plate, if more than one print of the same subject has to be laid down. To do it by hand is almost hopeless, even by the most skilful, and the matter is not much simplified, if at all, by re-transferring.

In America they appear to have come to the conclusion that the only solution of this difficulty is in the use of mechanical devices, and there are several equipments by different makers for laying down and repeating colour work in exact register. Some of the stepping machines are run by electric motor, the mechanism making the necessary steps and timing the exposure. The images are thus printed down all in the same strength, and when the plates are put on the machine there is no difficulty in getting register, for it is merely a question of adjusting the lay of the sheet. The register and uniformity of colour obtained is really wonderful. I have seen large sheets 60 in. by 40 in., covered with repeats of small labels in several colours, and the severest trade critic would hardly be able to find fault with the results. No transferrer could hope to compete with the speed and accuracy with which such work is done.

Not only label work is done by these mechanical devices, but also high-class colour work in large sizes. The results achieved by the Huebner-Bleistein apparatus are really marvellous, and this system has been long enough in use for its practical value to be fully determined. The Ogden and Directoplate are other machines having a similar object, and their purpose is attained very successfully, though they are not on the same large scale, nor have they the same degree of completeness as the Huebner-Bleistein apparatus.

Unfortunately, the price of these mechanical devices practically puts them out of the field of lithography in this country, because British printers do not have the long runs which would justify the expense. In America, where the jobs run into millions of copies, and where labour costs are so high, it pays to have such machines, no matter what they cost. Here it would not be possible, I fear, to earn the interest on the capital outlay. I do not know exactly what is the price of the Huebner-Bleistein outfit. Various figures have been mentioned, ranging from £6,000 to £15,000. A lot of work would be required to earn the interest on such figures and to pay the expense of running the plant. Besides, it would probably be difficult to find men who could straightway be turned on to such machines, and be expected to make good from the first. It would take time to train them, and whilst that was being done money would be rapidly going out without immediate return. I am afraid we must be content to plod along in our old way, dependent on skill of craftsmanship rather than on mechanical contrivances. We may envy our American cofrères in the wonderful mechanical facilities they possess, but they themselves are ready to acknowledge the excellence of British workmanship. We have the satisfaction of achieving something that is worthy of the making, which bears the impress of clever handicraft and has not the formality of a machine-made product. We may arrive at our results by slow and devious methods, but at least they are results that endure, and some of them will be treasured by future generations.

WEB ROTARY OFFSET PRINTING.

Now that offset has achieved almost everything that seems to be possible for it on sheet-fed machines, and has been speeded up to the utmost by means of automatic feeders, attention has been directed to the possibilities of web rotary offset printing, because it is felt that if ever offset is to be applied to newspaper and periodical production it must attain a speed approaching, if not equalling, the speeds of present-day rotary letterpress machines printing from stereo plates. Several machines have been built, but so far makers are uncertain as to the possible output. About 6,000 to 8,000 perfected sheets per hour seems to be the accepted practicable speed at the present time, though 10,000 has been attained in occasional spurts. Some think that 15,000 may be reached, but that has yet to be proved, and newspaper proprietors will want a lot of convincing yet before they begin to supersede their present plant. Personally, I have no great faith in offset printing ever being made practicable in the hurry-scurry conditions of a modern daily newspaper, or even those of a weekly of large circulation, but it may suit provincial weeklies of moderate circulation and with plenty of time for production. It may also serve very well for cheap magazine work.

One drawback of offset for newspaper work is the uncertainty of the life and clean continuous working of the plate. There are all sorts of influences calculated to cause deterioration during the run. However, we must not say positively that "it can't be done." New methods, such as dry litho, or wharf litho, or aquatone, may help, or it may be that the idea of etching offset plates in intaglio—that is to say, sinking the image below the surface—will prove the solution of the problem of securing a more durable plate.

PROSPECTIVE DEVELOPMENTS IN MULTI-COLOUR PRINTING.

In the near future we shall udoubtedly see some great developments in colour printing. In America the Claybourn processes and machinery are making great progress. The system deals with letterpress blocks, and aims at securing better register and printing quality by press improvements. One of their recent introductions is a proofing press with four plate beds arranged one after the other, each with a separate inking mechanism, the sheet to be printed being fed into the grippers of a cylinder which travels over all the plate beds in succession, retaining the sheet until it has received the impression of all the colours. Such an arrangement may provide good register and perfect inking, but the problem of printing one colour over the other whilst still wet will have to be solved. As, however, the purpose of this proofing press is to pull proofs of plates which have to be subsequently printed on multi-colour rotary presses, the wet proofing is no detriment, as it shows what will be the result of wet printing on the machine.

Multi-colour proofing and printing presses for letterpress should teach a great deal to the offset printer, as also will the multi-colour presses which are being made for rotary colour photogravure. In Germany there are three such presses in course of being tried out. They are designed to print four colours in succession from copper cylinders, and the speed expected is about 4,000 finished copies per hour. The difficulty so far has been to get good register.

One advantage which rotary photogravure possesses over letterpress and offset is that the drying of the ink can be speeded up to the required degree, so that no artificial drying or slip-sheeting is required. Very good colour work is being done on sheet-fed photogravure machines with automatic feeders, and it is found that three or four machines can be run alongside each other so that the product of one machine can be passed on to the neighbouring machine. In this way a speed of 2,500 per hour can be obtained, with an average of 2,000 per hour on the day's run, so that by having three or four machines running simultaneously the output is practically 2,000 finished three- or four-colour prints per hour, and 20,000 per day is usually attained in the establishment I have in mind. It might be worth the consideration of offset printers whether such a system could be adapted for their work, if it is not done already.

One can hardly predict what the future is going to bring forth as new processes and new machinery are developed. Printing methods are so interdependent that improvements in one branch will stimulate and suggest improvements in another. Blockmakers and letterpress printers need not regard with jealousy the advances of offset and photogravure. They are going to learn a great deal from the development of these processes, and if they take the lessons to heart and strive to improve their own methods, it may be years before the older processes are superseded by the new ones, if they ever are. Printing offers such a wide field of useful applications and employment that there is no doubt plenty of room for everybody and for all porcesses, no matter what mechanical appliances may be brought in.

All who are associated with printing ought to feel proud of the marvellous progress of the craft in recent years. In that progress the photo-mechanical processes which I have sought to explain have played a very great part, and they are destined to play a still more important part in the not-very-distant future.

DISCUSSION.

In opening the discussion which followed the lecture, Mr. Geo. Eaton Hart said they had not been disappointed, but were in a state of agitation as to their future. As a letterpress printer he would confine himself to the letterpress side. It all emphasised the complexity of their craft, and when people arrived at his age it was hopeless for them to attempt even to understand some of the depths and intricacies of some of the methods spoken of. Their lecturer had put forward the offset principle in a very modest and moderate way, and had given them courage to still continue as letterpress printers. The reference to the type-composing ma chine was rather interesting, seeing that only a few days ago they had the Rev. T. Walton giving them a lecture, in connection with the London School of Printing. Last year they had a lecture on the August machine, which he thought at the time was very much in the air, but would probably be brought to some more practical use. That had not yet appeared, but now they had this entirely new idea of a composing machine which would help forward the offset process and photogravure process as well. It was very difficult indeed to discover from the examples shown whether it was letterpress or offset, particularly the aquatone process work. That, of course, was not done by the offset process exactly, as a zinc plate was used. Although the process of printing down could not be very much cheaper than letterpress, there was the fact that no stereotypes nor electrotypes were wanted. It seemed to be a process bound to be developed. With regard to the web rotary offset, he would like to ask the lecturer, was the machine run at 6,000 per hour from one side or two sides? He used to scoff at the linotype, so one did not want to prophesy, as even newspapers might some time be printed by the offset process. There was still hope for the letterpress printer, but he had got to get his coat off and get down to his work.

Mr. Gamble said the speed of the web rotary machine was the speed of the delivery of the sheets and was normally about 6,000, running very well. It could do 8,000 and still run very well, but when put up to 10,000 it seemed to be going just a little slurringly, and that seemed to be about the limit. There was no definite proof that with further adjustments a still higher speed could not be run. A speed of 15,000 was the unit speed. Even 24,000 had been claimed, by putting on additional plates and duplicating some of the cylinders so as to increase the speed in that way—multiplying it up as with newspaper machines.

Mr. Frank Colebrook said, with regard to the speed of photo-composing, they only had to consider the speed at which the cinematograph worked. Some of the machines devised based on the cinematograph proved that one could get either sixteen a second, as they did with normal cinematography, or thirty-two a second, where they had to do two colours, as in the cinematograph colour process. They could easily multiply that up in seconds by 60 and 60 again, and they got an enormous speed which he thought they would find very much higher than the linotype. The ultimate speed must only be half as fast. It was simply a matter of the design of the machine. The practice to-day was the two-revolution principle, the impres-

sion cylinder being twice the diameter of the copper cylinder which causes no delay and no extra time for the plate to pass over the cylinder.

Mr. Tomkin (of Messrs. G. F. Tomkin, Ltd.) asked what the average output per day was? The machine might have a good running speed, but he understood there was some particular delay for dressing the plates.

Mr. Gamble said that was a good point. He had no information, but he should say they had to stop a good many times for washing up and re-inking the plate, and very likely have to put on more than one set of plates during the run, so that possibly during the day the run was not more than an average of 4,000 per hour.

Mr. Connolly (Messrs. F. J. Connolly, Ltd.) said that with the machine with two cylinders running in contact with one another at 3,500 per hour, automatically fed, if the man was competent there was no reason why he should suffer any great deduction on his output. It should do good work and need have very few stoppages. The machine was perfected. For instance, the damping had been perfected so that the amount of water was regulated the whole way through, and consequently troubles scarcely existed.

Mr. G. Eaton Hart asked Mr. Connolly what a fair day's work for an eight-hours day was, including stoppages for washing up.

Mr. Connolly suggested 16,000 to 18,000 perfected—about 35,000 impressions, allowing a big margin for stoppages.

Mr. Geddes (of Messrs. H. W. Caslon & Co., Ltd.) said he would like to express his thanks to Mr. Gamble. He was glad Mr. Gamble had said each process had its effects and defects, and he thought the letterpress men should realise it was up to them to develop the letterpress side more than they had. For instance, they should eliminate make-ready by improved processes. The letterpress man had a long way to go forward. He thought the letterpress man had not investigated by a long way the progress he was capable of, and he appreciated very much the differentiation Mr. Gamble had shown. He had practically said photogravure had its field, offset had its field, and letterpress had its field, and it was up to each of them in their own field, and so help each other.

Mr. R. B. Fishenden, in proposing a vote of thanks to Mr. Gamble, said they should all be proud that in Mr. Gamble they had a liaison officer between photo-engraving and the printing industry. He was sure that in no other country was there a man who had such a wonderful experience and could put the case for the application of offset to printing in the way he could. That constant discussion must always continue as to the relative positions of different branches of the print ing trade. They must remember that in any indus try where there was a large capital involved, that capital in the case of the letterpress machinery was bound to protect itself, and whatever technical developments might come they had still the very important item of salesmanship, which would en sure for letterpress printing a continuance of prosperity. Mr. Gamble had put into his very interesting remarks the experience of a lifetime, and made things clear even to those who had no experience of the ground covered. In the matter of the offset machine and the sharpness of the image, Mr. Gamble referred to the supposed necessity of a coarsely-grained plate for machine printing, but he thought it was being proved that the coarse grains had now very largely been displaced, and by a more careful understanding of the operation of the machines much finer grain could be adopted without any defect even at high speeds. In the matter of grained processes he supposed that the reason for the continuance of the use of the halftone screen was in its wonderful regularity, and he thought no grained process could be said to be comparable to the halftone screen in that way. Mr. Gamble had referred to the wonderful mezzo. screen, and it was most regrettable that it was no longer manufactured. He was very interested in Mr. Gamble's reference to the Albert process. He had been shown the whole process when it was worked at Alfred Cooke's at Leeds, and they were successful in obtaining results from it. There was no doubt about it. The decision and crispness of the highlights in the results obtained there have never been equalled by any other halftone process or any highlight method that had so far been invented; but it had very largely eliminated fine etching. It was, however, extremely difficult to work, and could not be worked on a commercial scale, though beautiful. He would like to echo something Mr. Geddes had said about the letterpress printer, but in a different way. Particularly in the matter of type printing, the letterpress printer had still a very large future open to him. Whether the composing machine still further progressed, or whether the idea of pnoto-composition came into its own—and it certainly was a distinct possibility—there still remained for the letterpress printer the best class of work, and no process of offset printing or any printing. could compete with letterpress printing in its own field for a high-grade impression, and that was the direction in which the letterpress printer should turn his attention—fine work and an improved standard. It was with the greatest possible pleasure that he proposed a vote of thanks to Mr. Gamble.

Mr. A. E. Goodwin, Secretary of the Federation of Master Printers, in seconding the vote of thanks, said he supposed Mr. Fishenden represented the majority of those present—those who were interested in all technical details. Perhaps he himself represented an inconsiderable portion of the audeince who were not quite able to appreciate all the technical points, but still had enjoyed very thoroughly the illuminating address Mr. Gamble had given them. In expressing their appreciation, he hoped he was voicing their views. Referring to Sir Oliver Lodge, Mr. Goodwin said Mr. Gamble held the same position in the world of print as Sir Oliver held in the world of science. Sir Oliver had said that it required a great deal of knowledge to-day to make any assertion in the scientific world, but it required a vast amount more knowledge to deny the possibilities of anything in the scientific world. Mr. Gamble had made them feel that the possibilities of everything in the printing world were immense, and he did not think anyone present was in a position to state that some of the things he had put before them were not likely to take place in the near future. Of course, the possibilities of litho printing on letterpress machines and the consequences of the demarcation of labour might cause concern. (Laughter.) He was sure they would all appreciate the fact that as Mr. Gamble had retired from business he would now have more time to devote to the subject. He looked upon the meeting as a very hopeful augury of the future of the

trade. When they had an audience of the kind present they felt that the printing trade was alive to its possibilities. They would be pleased to know they had a very distinguished visitor present—Colonel Willis—in charge of the Government of India Printing Department. They would appreciate his presence and warmly welcome him as a printer. He had been travelling in the provinces recently, and had been struck there with the amount of money and time being spent in experimental work. He would like to tell the London printers that if they thought they were the only people making experiments they were making a sad mistake, because everywhere there was a tendency to keep plant up to date. They must all welcome the enterprise being shown at the present time in the printing world. He referred to an article which appeared in THE CAXTON MAGAZINE, advocating a permanent exhibition of print, and he thought this suggestion should be developed, as it would be a great help to the trade.

He thanked Mr. Gamble very heartily for the time he had given in preparing the lecture, and for giving it to them in such a lucid and clear way.

Mr. Gamble, in acknowledging the vote of thanks, said he could only say it had been a very great pleasure to come and tell them what he could of the processes. He had thought that retiring from business he would not have been troubled any more, but instead of that he had been dragged away from the hobbies he played with to continue to talk shop! But the subject always interested him, and they would not find him wanting whenever they needed him to talk on the subject. He hoped to give them another lecture, and remind them of some of his words put to them then, and show that some of the predictions and dreams, as some people thought them, had come true, when the printing industry was very different from what it is to-day. He hoped it would be different in one sense. He hoped it would be a more profitable, and not only profitable, but more interesting business to be associated with. It would be conducted with more regard for science and mechanical inventions than with human skill. He was sure that was the direction they might look for great developments.

A New Business

OUR readers will be interested to note the establishment of a new and important business in London. This is Phototype, Ltd., who have purchased premises at West End Lane, High Barnet. These premises have been converted into a first-rate establishment for the production of printing surfaces for photo-litho offset printing in particular. Certain large interests in the printing trade, names of world-wide significance, and who have very large interest in book printing, and who are going to do a good deal of their printing, we understand, in future by offset printing rather than as hitherto by typography, are giving large orders for plates to this new business. Pictorial Machinery, Ltd., are supplying all necessary plant up to the production of the printing plate; in fact, a complete plant for everything responsible up to the printing surface is now being installed by Pictorial Machinery, Ltd. Not only is this so, but Pictorial Machinery have also consented to release two of their experts—Mr. Felix Choice, who was over 30 years ago with Mr. Corkett in his halftone block production business in Leicester as far back as 1894, in the interval being with Messrs. Eyre & Spottiswoode for 22 years, and since then again with Pictorial Machinery, Ltd., has accepted the position as managing director of this business; while Mr. J. H. Benton, also of Pictorial Machinery, is in charge of the photographic studios. With the most up-to-date apparatus, therefore, and such skilled assistants, much should be heard of Phototype, Ltd., in the future. We understand they already have in hand practically twelve months' work for the new plant. We are informed neither Pictorial Machinery, Ltd., nor Mr. Corkett personally has any financial connection with the new business. The plant that is being installed by Pictorial Machinery, Ltd., is, we are informed, by far the most perfect plant for the purpose yet established in Great Britain.

MR. E. KENNETH HUNTER has resigned his position as Technical Director of Messrs. Hunters, Ltd., 16-18, St. Bride Street, E.C., in order to devote himself exclusively to the August-Hunter Photo-composing Machine, of which he is co-inventor with Mr. J. R. C. August.

The London School of Printing

IT has been said that where the London School of Printing leads, others follow. It certainly sets a very high standard, not only in technical work, but also in its social activities—a direction in which others might find it difficult to follow Evidence of this high standard was given at the staff dinner on Saturday, January 3, when 100 members of the staff and their friends met to spend a social evening at the Connaught Rooms.

An interesting and inspiring speech was made by Mr. Henry Lewis Bullen, who proposed the toast of the London School of Printing, and was replied to in characteristic speeches by the Right Hon. Lord Riddell (President of the School) and Mr. T. E. Naylor, J.P., M.P. (Vice-Chairman of the School). Mr. W. Howard Hazell, J.P., Chairman of the School, in a remarkable and inspiring speech, proposed the toast of the staff, which was responded to by the Deputy Principal (Mr. J. Fuller). Mr. R. G. Radford proposed the toast of "The Visitors," and Mr. T. W. McAra, J.P. (Secretary of the Newspaper Proprietors' Association) and Mr. Alfred Langley (President of the London Master Printers' Association) replied. The toast of "The Stewards" was proposed by Mr. W. J. Pincombe, J.P., L.C.C., Mr. L. C. Mennell replying. An excellent musical programme was arranged by Mr. Herbert Townsend. Those who have the privillege of being present at these annual gatherings can easily understand the unbounded success of the London School of Printing. Further, they are always assured of not only an enjoyable evening, but of hearing in their best and most humorous vein some of the orators of the printing craft. Mrs. Wilton Phipps, chairman of the L.C.C. Education Committee, and Mr. G. H. Gater, the Education Officer, regretted their inability to be present, but sent their good wishes for an enjoyable evening.

MR. GEORGE UNWIN, of Unwin Brothers, Ltd., is taking a prolonged tour abroad. He has spent an enjoyable time in South Africa, and is at present in Australia. He is expected back about May.

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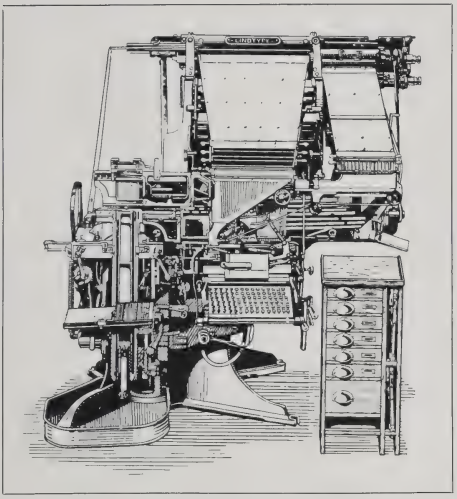
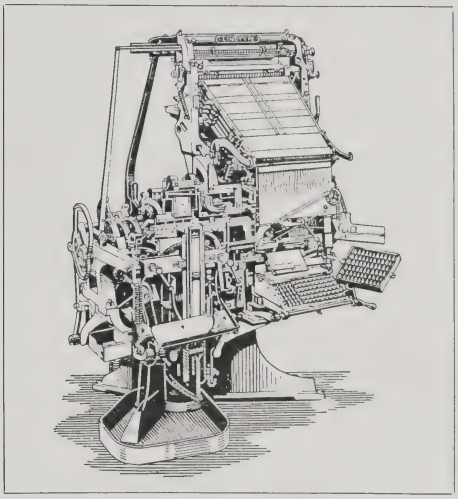


The machine as illustrated has a range of 5 to 36 point, and all faces can be set from the single standard keyboard. Mould and magazine changes can be effected in a few seconds. This model can be installed with three magazines only, and the side magazine section for extra large display added to the machine at a later date.

Model 6

WITH FOUR MAIN MAGAZINES



This model is recommended to those printers whose work requires a wide variety of type faces (roman, italic and display) in one and the same line. The standard magazine equipment provides four full size magazines, any adjacent two of which can be used together. Ordinary composition can be set on this Machine as readily as on Model 4.

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Mr. W. Howard Hazell on Selection and Training of Apprentices

THE matter of apprentices is vitally bound up with the best interests of the printing trade. We fear sufficient thought is not being devoted to this matter, and feel sure that very soon the whole question of the future supply of trained craftsmen will have to be radically tackled. Meanwhile we call attention to some articles which have appeared in The Times Trade and Engineering Supplement on this subject from the pen of Mr. Howard Hazell, and make no apology for reporducing the greater part of them for the benefit of our readers.

After pointing out that a chartered accountant in auditing the accounts of a firm had to omit one of the most important and valuable intangible assets, Mr. Hazell proceeds: "The missing asset is the skill, knowledge, and energy of the employes, without which the business cannot be carried on successfully. It is an asset of great importance, yet it is intangible, as it cannot be conveyed and retained in the same way as tangible assets. The employes are free to leave—after giving due notice—and their special knowledge of the processes, machines, and methods, and the wishes of the customers, would be lost if they resigned their positions.

ESSENTIAL ASSET.

"In every business, whether it be manufacturing, distributing, merchanting, or of any other nature, the accumulated knowledge and experience of the employes are an essential asset. It may be possible to obtain men and women with skill in their respective spheres equal to that of those now working. But let any employer think of the chaos and difficulties that would arise if the whole of his staff, from the manager to the boys in the office or factory, were replaced on one day by another set of persons, trained in their occupation, but ignorant of the peculiar needs of his business. Such a position would be a nightmare that few would like to face, and proves the value of the knowledge and experience gained by the employes in carrying on the particular business."

Mr. Hazell points out the difference in value of men and machines:

"The machine steadily depreciates in value year by year, until the cost of its repairs, or its poor product, renders it inefficient and it is sold or scrapped. A man, after he is trained in his youth, becomes usually of increasing use and value for some years, as his knowledge and experience grow. Then for many years, if he does not obtain a more responsible post, his efficiency remains constant, until old age saps his energy and skill, and retirement or death removes him from active work. Workers also leave from many causes when they are in the prime of life, and thus there is a steady loss of employes trained in the peculiar requirements of the business. The efficient life of a machine and a man are different in nature and length, but the same necessity exists for the replacement reserve being created for both these valuable assets."

REPLACING RESERVES.

"In many industries the old method of apprenticeship for several years still exists, and, though in others there may be no apprenticeship, the term 'apprentice' is here used as including all the young persons who come into industry of every kind. They are the 'replacement reserve' from which in the future the workers and many of the leaders in industry are to be drawn. The success of a business and of an industry depends chiefly upon the skill and knowledge of those who work in it. Therefore, anything that can be done to improve the quality, skill, and energy of the workers of every grade in industry is of great importance to all employers, and ultimately to the nation."

RIGHT TYPE OF APPRENTICE.

"In those industries in which a five or seven years' apprenticeship is customary it is usual to apprentice boys of 14 to 16 years of age by deed to an employer. It is a common practice when a vacancy for an apprentice occurs to select some boy in the works or the son of an employe. At first the boy will be wasting time and material, but later on he will be capable of doing good work, provided the right type has been chosen; it is therefore clear that the careful selection of apprentices is of the utmost importance. Education, physique, character and aptitudes are all qualities that should be investigated as far as possible. The vacancy may call for special qualifications. A printer's compositor should be well educated, able to spell, and have good eyesight. An engineer should have mechanical tastes and aptitudes, and a clerk should write a good hand and be quick at figures. In some occupations height and physical strength are of importance, but in others they are not necessary. In all industries good character, health, and energy are of great value in building up the replacement reserve for the staff of the future."

Mr. Hazell then deals with "misfits," and how to deal with cases where it is discovered after indentures are signed that the boy is unlikely to "make good." He then talks of the

DANGER OF REPETITION WORK.

"When an employer has trained an apprentice for two or three years, the unproductive period has been passed, and he is naturally anxious to keep the lad for the later years when he can produce good work. If this clause were more generally adopted, it might be desirable to stipulate that the apprenticeship deed could not be cancelled without the approval of some independent arbitrator.

"There is a risk, particularly in large organisations, that an apprentice may be kept on repetition work, or in one section, so long that he is not properly trained. In some businesses it is the rule that at the end of each year the apprentice and the overseer shall come before the principal or manager so that his progress may be considered and his capacity, compared with that of a skilled workman, may be tested. The interview also gives the lad an opportunity of ventilating any grievance he may have, and by discussing any difficulties in the presence of the overseer they can usually be cleared up. A few words of reprimand or of encouragement to the lad in such circumstances will not be

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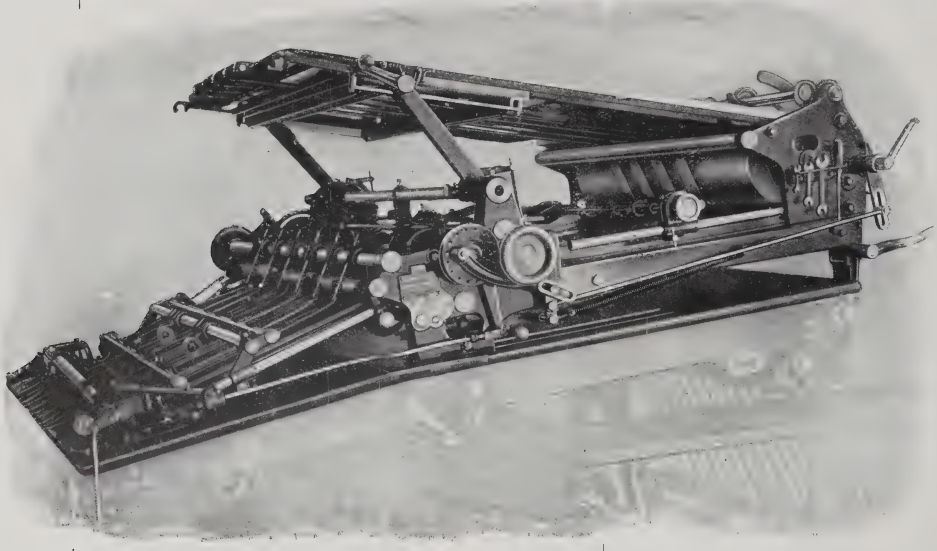

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forgotten by him. The interview brings the management into personal touch with the young people who are to be the future adult workers in the business.

" If at the same time a cash bonus is given to him, it is an incentive to the industrious and a warning to the unsatisfactory apprentice. One company gives a bonus of one pound or less each year, according to the apprentice's record for punctuality, good conduct, progress in his work, and efforts for further education. A final bonus of four pounds is paid in the last year, if the general record is satisfactory. This expenditure of ten pounds in seven years has a most salutary effect, and the result of a reduction in the annual bonus, and a reprimand if the apprentice's conduct has been unsatisfactory, is an undoubted stimulus to better behaviour in the future. If the report and bonuses are entered on a copy of the indenture, it is a complete record of the apprentice's service, and when his conduct has been good he can show the report to any future employer. The time and money are well expended, and the effect on the apprentices is very beneficial."

As might be expected, an educational enthusiast like Mr. Hazell has much to say about

THE VALUE OF TECHNICAL EDUCATION.

" In most industries it is now recognised that the training in the workshop should be supplemented by instruction in technical classes. Manual skill and speed in production can only be acquired by long practice in the factory, but there is much to be learned in the technical classes.

" The theoretical side of the craft can be better taught in a class than picked up in the workshop, and in a carefully-prepared syllabus much that may be overlooked in the hustle and pressure of factory production can be taught. The tendency of to-day is towards mass production and specialisation, and there is a risk that a lad may be kept on one class of work or on one type of machine instead of learning the various methods of production and processes in his trade.

" In a technical school, if it be properly equipped with modern machinery and methods, this difficulty will be overcome, and by following a course of training the apprentice will learn to understand the various machines and processes, so that, should he leave his employer, he would be competent to take a situation in any factory. The workshop where he is engaged may be up-to-date and well-equipped, or it may be the reverse, but by attending good technical classes he will fill in the gaps in his knowledge and experience and become a properly qualified craftsman.

TECHNICAL SCHOOLS.

" In most cities there are technical schools in which instruction is given in the principal industries of the district, and it is easy for the employer to arrange for his apprentices to follow a suitable course. In smaller towns and in the country it is less easy. Many employers, however, realise the necessity for this instruction, and have arranged for their apprentices and learners to visit the nearest town where classes are available, or for an instructor to visit their factory. When there are several manufacturers in the same industry in the town, a joint class could be arranged, and, if the education authority were consulted, a part of the expense incurred would probably be borne by it. When this plan is adopted the worker in the country and smaller towns has the same advantages as those in the cities, to his own benefit as well as that of his employer.

" When technical classes were first started they were usually held in the evening, and the industrious apprentice sacrificed two or three evenings per week of his leisure in order to attend classes. Many employers gradually realised that boys and girls of 14 to 16 or 17 years of age could not be expected to work eight or nine hours a day in a factory and then be fresh and fit to benefit by further instruction in their trade in the evening. The change from a few hours of work in a school to the 48 hours per week in a factory is enormous, and, in addition, in large cities an hour or two each day is spent in travelling from home to the factory. The 48 hours' work often means 11 or 12 hours' absence from home each day, and tired pupils can never be satisfactory students.

CLASSES IN EMPLOYERS' TIME.

" In several industries it is now an established practice that the younger apprentices should attend technical classes for four or even eight hours per week in the employer's time. When there are sufficient students the classes can be so arranged that only a few apprentices are absent at one time, and thus the interference with the work in the factory is minimised. With the older apprentices it is not unreasonable to require them to attend classes in the evening. Some employers might object to paying the fees of the classes, as they consider that the apprentice should pay them himself. Usually the earnings of an apprentice—certainly in his earlier years—are small, and the expense might deter him from attending the classes. It should be remembered that the employer benefits if his apprentices are trained carefully and are skilled in their work. He has undertaken to teach them their trade properly, and he should see they receive the best training possible in his factory and the schools. In later years, when the earnings are increased, the young man or woman might be asked to pay a portion of the fees. If the student bears part of the expense himself, it is certain he will work hard and not waste his time.

THE OFFICE STAFF.

" Hitherto in this article the apprentice or learner in the factory has been dealt with principally, but all that has been said applies with equal force to all the young people coming into any part of a business, whether they are called pupils, apprentices, learners, or juniors. The need of every business is that new blood and young people should always be coming forward, to allow for expansion and to take the place of those older workers who must inevitably cease work. The office staff is as important as the factory staff, and care and attention given to the training of the juniors will have equally beneficial results. The office boy may develop into an invaluable chief clerk or manager, or a young girl into the private secretary of the principal, but this progress is impossible unless care has been exercised in the selection of the junior staff and their training has been watched and encouraged. The subjects they can study are very varied, and the wider their training the greater possibilities there are of their becoming increasingly valuable to the firm.

" HIRING " AND " FIRING " SYSTEM.

" It is possible that there may be some employers who take a short-sighted view of their responsibilities, and who do not wish to be troubled with train-

ing their apprentices or learners. They may prefer to adopt the method which the Americans call 'hiring and firing,' and engage men and women who have been trained elsewhere, and dismiss those employes who are unsatisfactory, until at last they find some who fulfil their requirements. The American employers have found that 'hiring and firing' is an expensive process, as in many industries a newcomer is not worth his wage until he has learned something of the class of work and methods in the factory. If after a trial he be found unsatisfactory, he has to be 'fired,' and the same process of 'hiring,' and possibly 'firing,' is repeated. It is a far wiser policy to select carefully the young persons needed and train them in the methods of the organisation.

"Another reason why it is desirable to have a number of young persons in the firm is to establish a tone, an atmosphere, an *esprit de corps* in the business. A school or a regiment needs that *esprit de corps* if it is to succeed. It is equally necessary in a business if it is to be efficient. Age brings knowledge and experience; youth supplies the energy and optimism. Age tends to become slow and conservative, while youth can maintain the speed and is more willing to accept new ideas and try new methods. It is well for a business to have a reasonable proportion of young and elderly men and women, so that each may supply the qualities that are peculiar to their age and temperament.

"When a new worker enters a factory, he is insensibly influenced by the tone of the place and the attitude of the employes. The tendency will be for him to speed up or slow down to the level of those around him, and the employer who has carefully trained his apprentices can be sure that he has done a great deal to promote a good tone in his establishment. New processes, methods, and machines are constantly being introduced in every industry, and the keen and energetic apprentice or young craftsman will probably be more successful with the new idea than those who are old and set in their way.

INDUSTRIAL PSYCHOLOGY.

"The best methods of selecting apprentices and others who wish to enter industry are being carefully and scientifically investigated by the Institute of Industrial Psychology. The education, physique, and apparent suitability of applicants may seem all that is desirable, and yet in many instances time has proved that they had not the necessary aptitudes and qualifications for the occupation they entered. Much time and energy are thus wasted, and the 'misfit' may have no chance of being trained in another occupation for which he is more suited. Each industry requires certain qualifications that may not be required in others, and one of the aims of the Institute is to investigate the requirements of various trades and devise a series of tests by which the unsuitable applicant will be eliminated. This scientific method is only in its infancy, and much work has yet to be done before the tests can be proved to be conclusive. It would, however, be of great assistance to employers if suitable tests could be devised for each industry. The psychology and less evident characteristics of an individual must be considered, as well as those qualities which can be found by elementary methods. It will be to the advantage of the workers, the employers, and industry if these tests will help in finding the round man for the round hole and putting the square man in the square hole

"This article started by describing the carefully-selected and well-trained apprentice as the 'replacement reserve' of the accumulated skill, knowledge, and energy of the workers in an organisation. Such a reserve is essential to the success and development of any business. The methods of the past are no good for to-day, in view of the increasing competition from all parts of the world. Capital and plant, and the knowledge and energy of the employers, are valueless unless there is a sufficient supply of well-trained and energetic workers of every grade. As competition increases, still greater attention must be given to the training of the workers. Every employer who exercises the care that has been suggested is helping to improve the quality not only of his own, but of other organisations. The high example he sets must influence his competitors and help to set a better standard in his industry. Then as these improved methods become generally adopted, the skill and efficiency of all the workers are raised, and the whole industry is better fitted to retain or increase its hold upon the commerce of the world."

Costing and Estimating Examinations

THE following are the results of the Costing and Estimating Examinations held at Stationers' Hall on December 15, 1924. These examinations are arranged by the Stationers' Company and Printing Industry Technical Board, and the examiners are Mr. W. Howard Hazell, J.P., Vice-President of the Master Printers' Federation (Costing), and Mr. Alfred Langley, President of the London Master Printers' Association (Estimating).

COSTING.

First Class Certificates.—F. Bolt, Miss D. Bowman, S. P. Brand, W. C. Clarke, S. H. Clayton, A. R. Ford, A. S. Free, Miss H. M. Frost, S. L. Godfrey, E. K. Grieve, J. Guyatt, Miss A. B. Hayward, D. H. Henley, L. W. Hobcraft, E. V. Kanade, H. A. P. Langley, G. Macaree, S. H. Messling, C. H. Newton, A. T. Norman (second prize), E. Perrin, A. W. Pizzey, J. A. Place, J. Shand, B. Sharpe, H. W. Shea, E. J. Simmonds, C. R. Snelling, T. W. Tily, H. Woodhall (first prize).

Second Class Certificates.—E. G. Beamand, S. R. Brown, E. I. Cozens, H. B. Dean, Miss C. M. Frost, C. W. Gibbs, S. R. Hollis, T. H. Indge, C. W. Leader, J. P. A. Page, A. C. Peal, R. W. Sheppard, L. Slee, E. Thomson.

ESTIMATING.

First Class Certificates.—E. W. Kirby (first prize), F. A. Morris, J. F. Turnpenny (second prize).

Second Class Certificates.—F. J. Ahrens, A. A. Anderson, W. C. Austin, L. H. Clark, W. H. Clift, W. J. Cowen, J. L. Dixon, P. Driscoll, E. Elms, E. A. Fry, E. H. Glover, F. J. Holroyde, C. Lamprell, E. J. Mercer, T. W. Miller.

Caslon Type-faces

BY using Caslon Types, dignified and effective letterpress printing is assured. The letter most recently added to Caslon stocks of effective types, viz., the Nicolas Cochin series, in the roman of which this advertisement is set, has rapidly gained wide popularity, especially for magazine and news advertisement display. Robustly artistic and spirited in design, it gives distinction to every job in which it appears. It is cast in eight sizes of the roman, and seven of the italic.

H.W. Caslon & Co. Ltd.

Typefounders

Providers of Printing Materials of all kinds

82 Chiswell Street, London, E.C. 1

Telegrams: "Caslon, Phone, London." 'Phones: Clerkenwell 2740-1-2-3

And at Manchester, Glasgow, and Dublin

SET IN CASLONS' NICOLAS COCHIN ROMAN, WITH 10-PT. NO. 13 BORDER

Letterpress Posters*

By ALFRED LANGLEY (President of the London Master Printers' Association).

I MUST ask you to accept the few rambling notes I have made as just a few thoughts jotted down at odd times—in odd moments, and some in odd places—as I do not offer them to you as a treatise on, or a study of, poster printing in any sense. I do not even venture to give them as my convictions, as I really have not had time to reason with myself on the arguments I have endeavoured to express. I offer them to you for what they are—ideas that occurred to me at odd times, in an endeavour to find something that might be provocative of discussion, and lead to a more serious consideration of a subject which seems to have been sadly neglected, perhaps because it is not thought worthy of the serious consideration of the pundits of our profession.

DEMAND FOR BETTER PRINTING.

The standard of printing has been raised considerably in recent years, and the demand for better work is spreading throughout all classes of advertisers. The knowledge of lettering and the discriminating taste shown by our customers to-day are no doubt due in a large measure to the influence of the advertising fraternity who have found their way in, owing to the neglect of printers to recognise the science of advertising and the varied potentialities of artistic printing as an advertising force. Printers, for many years, kept their productions within the limits of what they could obtain ready-made from the material supply house, and, I fear, even to-day, would be limiting the artistic scope of their work to the same confines had the advertising agents not brought fresh views, divergent ideas and originality to bear in the preparation of advertisements. I venture to think that the printer has for too long overlooked the fact that he is primarily a medium for publicity. It is mainly because he has been too much engrossed with the details of printing to consider that what he was engaged in producing was intended to be an advertisement. Had the printer first considered the object for which the job was ordered, he would have acquired the advertising sense and have been the architect as well as the builder.

In letterpress poster printing there is a very large scope for the artist who has the advertising sense, and more scope than in many other departments of job printing. Here one can obtain broad effects with little effort. The aim of advertisers is to get a distinctive note in all their advertising, hence the demand for ideas from artists and for the individualist touch in every job. It is true that the letterpress printer is confined in his production to the type he has available, and is more or less in the same category as the maker of ready-made clothing. While the maker of ready-made clothing is restricted in his production to the particular patterns he has prepared, and is engaged more or less in repetition work, the printer is able to ring constant changes on his product with his particular stock patterns or movable types. Further, the printer is enabled by the flexibility of his patterns to give range to his abilities, and expression to any art that may be latent in him.

*Lecture delivered to the London Society of Compositors Jobbing Guild, Jan. 14th, 1925.

THE OLD POSTER.

In poster printing, up to a few years ago, little regard was ever paid to the colour value of the various faces chosen, and the effect of the various styles or faces upon each other, these being used merely because they fitted the line produced. The main idea seemed to be that a full line should be followed by a catch-line, and that in turn should be followed by a three-quarter line, and so on indefinitely until the bill was completed. If the type indicated as most desirable to use failed to fill the line, then it was spaced, regardless of character and the proper proportion of white necessary, until it made a full line. The idea that the word "Concert," "Ball," or "Fête," being the object of the advertisement, could be printed to appear as the feature of the poster in anything short of a full line was quite out of the question. Can anyone say why? Compressed letters were cut in infinite variety to enable us to get along lines in massed formation—I presume for shock tactics, surely never for legibility!

THE NEW POSTER.

The pendulum has taken its swing, and one is pleased to note that we are getting back to lettering that is not only graceful and beautiful, but far more legible. At the same time one must deplore the tendency of some schools to confuse eccentricity and the striving after originality with gracefulness and beauty. In striving after originality many of the modern school have rushed into chaos. It is an aftermath of the war, and a disease as malignant as Futurism, Jazz, and Bolshevism.

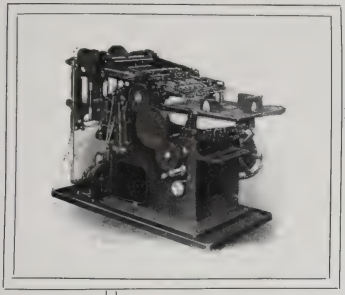
WHAT'S A POSTER FOR?

The object of a poster is to give information. Its essential points are:—

1. It must give information in a manner that shall compel attention.
2. It must be legible at a distance commensurate with its size.
3. It must be suitable in style to the subject it advertises.
4. It must be attractive in its design, display and colour scheme, all of which must be in harmony with the subject-matter, in order to obtain the effect or create the impression it is desired to create in the mind of the reader.

THE SHOUT.

First of all, a poster, to be good advertising, must of necessity give information. A poster is intended to call the attention of the passer-by, or the man in the street, and should not be a puzzle or enigma for those with spare time to spend in solving it. It is not merely a certain amount of typesetting impressed upon paper and stuck up on the chance of meeting the eye of the passer-by. Puzzles, or acrobatic contortions in display for the mere excitement of curiosity, or novelty for novelty's sake, and all such abominations I shall endeavour to prove cannot be described as posters, if you accept what I venture to put forward as definitions. A poster should compel attention, but it does not follow that it should compel attention by any tricks of eccentricity. The compositor has



The

Kelly Press

A REVOLUTION

IT'S now over five years ago that the Kelly started revolutionising the English job press room. Too slow a process to be sensational, particularly in this country, but nevertheless, a true revolution.

Two-revolution, in fact. That's why the Kelly has succeeded. It's not a freak, or a platen in disguise. Just a two-revolution in which not one atom of printing stability and reliability has been sacrificed to speed. Yet, the speed of the Kelly is greater than that of other machines giving results inferior to the Kelly product.

The Kelly prints better and more economically any commercial work coming within its range of sizes. It will stand up to the heaviest formes and give dead register and delighted satisfaction on three-colour process work.

Moreover, the Kelly has been doing this for five years. The Kelly had to win through entirely on its own merits as a machine, and it has conclusively proved its unapproachable value.

The 1925 method is the Kelly method . . *and it pays.*

The Canadian-American Machinery Co., LTD

Camco House, 63, Farringdon Street, LONDON, E.C.4.

Telephone - Central 1165-6926.

A·M·C

no need to endeavour to make his forme emulate performing dogs. There is a compelling appeal in simplicity, and far more eloquence in truth and purity of style. No poster has more room or space upon the paper than is necessary to make the announcement required. It follows, then, that the potential readers whose attention is desired have no use for embellishments that are suitable to the appeal, and, at the same time, in harmony with the scheme, are taboo; but when one looks back upon the posters of the '80's and '90's with the so-called ornaments that were used to fill lines set in unsuitable types, one marvels at the patience of the long-suffering customer.

THE SHOUT MUST BE HEARD.

I come now to my second essential, that a poster should be legible at a distance commensurate with its size. Let me deal with the latter part of this assertion, "a distance commensurate with its size," because this brings me to a point which it is very necessary to stress, viz., Salesmanship. A full knowledge of the customer's intentions is of vital necessity to successful salesmanship, and illustrates my oft-repeated assertion that it is not always good to let a customer have what he thinks he wants. A poster, like every other job, gets nearer perfection the nearer it fulfils the object for which it is required, and secures the results that the customer desires. The printer should be the arbiter in a question of that kind.

A POSTER MUST BE SUITABLE TO ITS SUBJECT.

Now let me come to Point 3. A poster should be suitable in style to the subject it advertises. This is where one has to tread very warily, as I am aware there are no two people with tastes identical, and to dogmatise on art is to ask for trouble and display ignorance. I do not propose to dogmatise on art, but we can find common ground on suitability and the recognised canons, although we have no recognised definitions of art, or at any rate none that we may be able to agree upon. How many posters do we see that are suitable in style to the subject they advertise? Are we going to deny that there is as much expression in the printed work and the method of its presentation to the public as there is in a picture? The artist expresses his feelings and temperament to the best of his ability, and if the picture portrays the feeling he sets out to express, we say he has put his soul upon the canvas—not only because he has painted the picture to satisfy the cravings of his soul, but because the finished product strikes within the one who views it a responding chord, or, in other words, he has made the appeal. Now it may seem absurd to compare the appeal of the painter with the work of a poster compositor. Personally I do not think so. The messages left by the ancients which are to-day compelling attention by their delightful and graceful lines, have survived all clamourings of fashion throughout the long ages, and make their appeal because they bear the impress of the true artist, who got down to fundamental truth in advertising, the appeal to the finer instincts, the appeal to the love of beautiful things. Then, if a poster is to achieve its object, the type display must be in harmony with its subject, the type should convey the colour and atmosphere of the subject which it is advertising.

Let me instance a common illustration of what I mean. Take the auctioneer's poster, the double-crown, or double-demy bill that is frequently issued for the sale of furniture. Now assume that the auctioneer obtains instructions for the sale of "period" furniture. The differentiation in style of types used is frequently made by some houses who cater for that class of work. We have few "period" faces of types, but the standard classic, Caslon Old Face, has been sucessfully employed to create the atmosphere required, and does so by the association of ideas. The use of Caslon Old Face indicates the period of good furniture. This already accepted idea illustrates what I have endeavoured to convey to you, but the idea I desire to force home is that every job set by a printer should be set with the same idea of being suitable for the subject it advertises, and that we should stand or fall as an artist succeeds or fails, according to the measure of his appeal.

THE POSTER MUST BE ATTRACTIVE.

To be as attractive as possible, its design, display and colour scheme should all be in harmony with its subject-matter (my fourth condition), thus creating the right impression in the mind of the reader. It stands to reason that if the poster does not create the right impression, or the impression desired, upon the mind of the reader, it fails to attract the man for whom the appeal is intended, and it fails therefore in advertising value, which, after all, is the main object of its publication. To give information is placed as my first essential, but it must fail utterly if it fail to reach those by whom that information is desired, or those whom the publishers deem to be requiring that information. Further, it follows that an interest can only be awakened or created in the minds of those referred to by a poster that attracts or appeals, or that strikes a responding chord in the mind of the reader.

While it is possible to admire the colour notes and schemes of the sixteen-sheet posters issued to advertise the British Empire Exhibition, one could not by any possible means describe them as good advertising, and to my mind they failed as posters. A poster that is designed to attract twenty millions of people to a big show needs to be one with a clear call to the man in the street. The hoarding is not the proper place for enigmas and puzzles, or philosophic paragraphs. These should be left to the leaflet or pamphlet that can be studied at leisure. The highest art, we are told, lies in concealing art, and there might have been a wealth of concealed art in the hieroglyphics and cryptic drawings at the head of those philosophic paragraphs, but I am quite sure that the few who might have had eyes to discern it and minds to absorb the letterpress would not have kept Wembley Exhibition open a few hours—and yet it was understood that many millions of visitors were required to avert a loss upon the undertaking. The lettering and execution were beautiful, but mere beauty is not sufficient if the poster fail to interest those whom it is designed to attract.

PAPER.

Now let us get down to earth, or rather to the cold composing surface—for no one is more conscious than I of the fact that words, mere words and pretensions of that much-abused subject, art, are of little value in the bulk of small jobbing houses where the bulk of the small job posters are produced. If you accept my view that a poster is not merely the covering of paper with a mass of lettering of various sizes and shapes, may I venture to give my idea of what goes to the making of a poster to meet the essentials which I have been

AT THE SEVENTH INTERNATIONAL

PRINTING

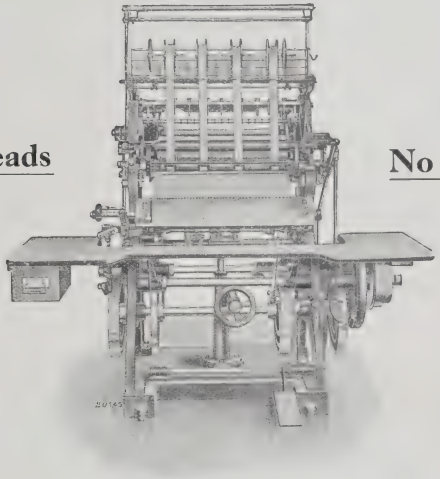
Stationery and Allied Trades

EXHIBITION

WE SHALL BE SHOWING OUR

"Martini" Simplified Book Sewing Machines

No Needle Heads **No Needle Heads**



The Latest and most up-to-date SEWING MACHINE on the Market, which eliminates the old principle of Needle Heads, thereby simplifying the Machine and giving stronger and tighter sewing.

We are also Exhibiting our well-known

"MARTINI" Thread Stitching & Knotting Machine

designed for stitching with thread all classes of work hitherto stitched by wire, also for Card Looping, etc.

The above New Models embody all the latest improvements, and the same will be shown in actual operation on the Stand, and demonstrations of the working of these Machines will be given to visitors.

Oscar Friedheim Ltd **25, Water Lane, Ludgate, LONDON E.C.4.**

Telegrams: "Friedheim, Cent, London." *Telephone: Central* 6216. *Cables: A.B.C. 5th Edition.*

venturesome enough to tabulate. Legibility is not only desirable for the essentials detailed, but absolutely necessary. Spacing and white are indispensable to legibility, and play a most important part in all the essentials and definitions referred to. "Paper is part of the picture," we are often told; and in no instance is the statement so true as in poster work. The paper that shows between the printing "gives each line view."

TYPES.

The choice of types is governed by the faces available in the office, and in many offices they appear to be very limited. In the poster department, as in the jobbing caseroom, families or series are desirable; and the choice of such series must necessarily be governed by the nature or subject of the work it is desired to cater for—or, at any rate, that which is cultivated. The employment of lower-case is not only desirable, but necessary. The judicious use of texts very ocasionally lends a charm and fills a need in certain instances, provided their use is not in conflict with any of the essential points mentioned earlier. A mass of capitals, line after line, fails by the tests I have applied.

EMBELLISHMENTS.

There is a place occasionally in the perfect poster for embellishment, and I do not despise the use of certain, what I term, "peculiar" sorts. I hold that, provided there is a place for them, they lend a piquancy and colour difficult to convey in any other way, and strengthen the necessary appeal. By peculiar sorts I mean the linked "O" where double-O appears, the long-tailed "Q," and certain paragraph marks, provided always they are suitable to the occasion and necessary to the picture. The rules concerning borders to posters are difficult to define, but the border should frame the job as a picture, and not be employed for the sake of dragging in the resources of the composing-room or to give the artist the credit for having a nice taste in frames.

COLOUR IN LETTERPRESS POSTERS.

The question of colour in a poster comes under the axioms I have endeavoured to expound. It effects legibility, suitability, and more especially harmony with the poster's objective. How many colours should be employed, and what should be the position of those colours, or the position of the second colour, if only two be employed? It is generally agreed, I think, that, for outstanding definition and visibility, black ink on orange or bright yellow comes first for sheer prominence, but it is quite obvious that the occasions for the employment of that combination must of necessity be very limited.

When we turn to the large number of letterpress posters that have, for many years prior to the war, been printed locally in this country for occasions such as fairs, agricultural shows, provincial town concerts, seaside pier pavilions, we find that at least two colours of ink, often three or four various colours, have been employed, with the idea of making an attractive bill. But do we find that the extra colours, beyond lending a kaleidoscopic effect of variety, give any greater advertising power to the message the bill contains? I think not. I much doubt the value of coloured lines, as frequently introduced in many of the letterpress bills issued. Unless the second colour used be introduced with great care and discrimination, the extra cost of production is to a great extent wasted. There are many instances, however, where a touch of colour is of infinite value, and especially where it becomes part of the picture, and conveys that touch that is necessary to drive home the appeal or create an atmosphere that will excite interest in the particular subject advertised.

THE AUCTION BILL.

As an instance, I would again refer to the auctioneer's bill announcing the sale of a house, where text or black letter is introduced. If the bill be printed in black or brown ink, on white or toned paper, the text line giving the name of the house advertised, if printed in red, completes the scheme. But the poster that is produced with lines indiscriminately printed in alternate red and black (the red ink being introduced merely with the idea of giving emphasis) fails to perform what is desired as disastrously as the misuse of italics in large patches or the constantly-recurring under-scoring in a woman's letter, fails to give emphasis, and leaves the reader cold to the appeal.

After all said and done, no ink is so visible and legible as good black ink, and the only use the second colour can serve is to throw up the effect of the black, and incidentally render the particular red line noticeable by its contrast, standing as it does in proximity to the upper and lower black lines. If the bill be mainly in black, a colour line should never appear at the top.

DISCRETION OF THE PRINTER.

Many of my remarks, I am fully aware, apply to posters where there is a very large margin in the scope of discretion allowed to the printer, and perhaps the number of printers who get unlimited licence with a customer is very small. We know that the bulk of poster work that comes to the small jobbing offices is of a class that comes generally within prescribed categories. The double-crown concert poster with the usual list of artistes in addition to the place, object, date and particulars of where tickets can be obtained, is of this class Admittedly, there does not seem much scope for originality or opportunity to evolve anything in the nature of a new lay-out. The same applies to the usual auctioneer's poster. Both kinds of posters seem to have traditional precedents, which must be observed.

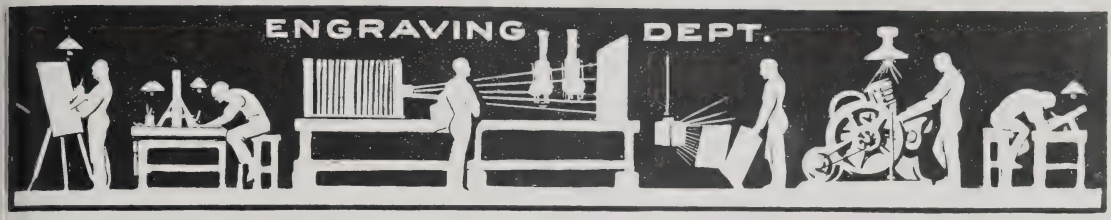
Be this as it may, I still hold that it is possible for the printer with imagination to conceive and produce posters with a new note in the scheme, and by gradual evolution reform the traditional errors until he creates a style of his own that will eventually mark his products as distinctive and place him safely out of the rut.

CHOICE OF TYPE FACES.

The choice of types is one that needs care and discrimination. Opinions vary so considerably as to what the perfect letter should be. The last few years have brought about a complete revolution in taste. Advertisers generally have recognised the claims of the daintier faces, not only for their daintiness and air of refinement, but on the grounds of legibility and distinctiveness.

Seldom do we find that a letter, whether in metal jobbing founts or in poster type, looks equally well in all sizes. It is a peculiarity of most designs and series of founts that certain sizes seem to suit the character and convey the atmosphere of the original design, while many of the intervening sizes appear to lose their characteristics. This would seem to point to the fact that all lettering is originally cut

Dalziel's SIX Departments



ONE AT
19-25 EARL STREET, FINSBURY, E.C. 2.

PHOTO ENGRAVINGS

THREE COLOUR PROCESS
FOUR COLOUR PROCESS
HALF-TONE BLOCKS
LINE ENGRAVINGS
ARTISTS' WORK

ONE AT
2a PLOUGH COURT, FETTER LANE, E.C.4.

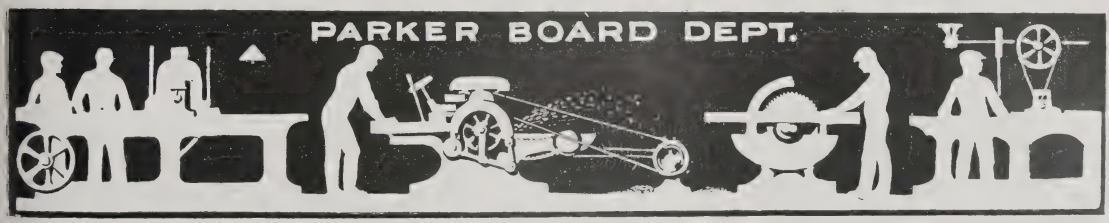
ONE AT
19-25 EARL STREET, FINSBURY, E.C.2, and

ONE AT
5-7 MARSH STREET, ANCOATS, MANCHESTER.

DALZIEL STEREOS

COLOUR PLATES
ROTARY PLATES
BOOK PLATES
JOBBING PLATES

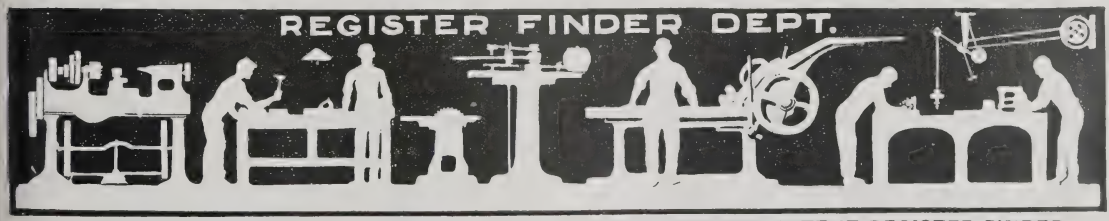
THE 6TH
See opposite page.



ONE AT
19-25 EARL STREET, FINSBURY, E.C. 2.

PARKER PATENT MOUNTING BOARDS

FOOLSCAP 8vo TO QUAD ROYAL
FOR ORIGINAL PLATES
FOR DALZIEL STEREOS
FOR COMMON STEREOS
FOR ELECTROTYPES



ONE AT
19-25 EARL STREET, FINSBURY, E.C. 2.

DALZIEL PATENT REGISTER FINDER

BY MEANS OF THIS INVENTION WE ARE ABLE TO SUPPLY OUR ORIGINAL COLOUR PLATES, OR DALZIEL STEREOS TAKEN FROM THEM MOUNTED IN GOOD REGISTER ON PARKER BOARDS BEFORE GOING TO PRESS

and drawn in one size by the designer, the design being conceived with a certain definite size in mind. We know that enlargements and reductions in most designs affect their character. I have found that drawings made for line zinco work are frequently very unsatisfactory when reproduced in larger sizes, although the photography has produced a perfect-in-detail reproduction. This phenomenon is very marked in drawings where the white is unevenly distributed. The enlargement sometimes has the effect of enlarging the patches of white and condensing the masses of solids. Something of this kind may account for what I have mentioned in connection with lettering and account for the loss of character in certain sizes of types.

Like all typefounders' type, only more frequently, poster types need the correcting discrimination of the compositor in the way of letter-spacing. Little regard seems to be paid to the value of correct spacing of letters by typefounders or wood-letter cutters; hence the compositor who would get the perfect effect must use his discretion as to the position of one letter relative to another, and adjust the distance by judicious spacing.

SALESMANSHIP.

Just a word on salesmanship. Many posters are spoiled at conception by attempting to make them do duty for a circular. The art of writing copy for a poster is one that needs careful consideration. It is a common failing of the customer to want to say too much in his announcement, and the mere fact that the compositor has been able to set up all the copy and get his typesetting into the prescribed space does not mean that a poster has been produced, nor does it follow that the production will achieve the objects desired by the customer. I am convinced that too many of us accept copy and take instructions as blindly and meekly as children, and too few of us consider the effect of the implicit instructions we accept upon the advertising value of the finished production. The success of the job is going to be measured in the long run by its advertising value, and what we have to remember is that the customer is not often an advertising expert, whereas the printer should be.

Whether the customer appreciates the point or not, the success of a poster due to its value as an advertising medium is bound to become patent and bring more work to the printer eventually, whilst a bad production not only does harm to the reputation of the producer, but places a stigma on advertising generally, and discourages the use of such printing, to the detriment of the trade, as well as of the printer himself. The customer can only give us the copy of his message: it is up to the printer to revise and give his words the necessary inflexion and expression, in order that the message shall achieve the object the customer has in view.

ADVANCE IN POSTER PRINTING.

In no part of our craft has so little advance or improvement been made as in the poster production of jobbing offices. Can we wonder that the demand for letterpress posters in the average jobbing offices is so small? The picture poster will always have a strong pull over the letterpress poster, but each has its sphere, and many more letterpress posters, involving more work for the jobbing printer, will be required than are produced now, if only the jobbing printer will realise that there is scope for any printed matter that achieves the main object of commercial concerns, namely, publicity. No greater power of publicity lies anywhere than in poster advertising. No cheaper means to convey a message to the public exists than in posters. The reason why advertisers and advertising men do not use letterpress posters and showcards to a larger extent is because of the difficulty in getting the average jobbing printer to produce a poster that will make the appeal the advertiser wants to make.

INKS.

The question of inks is one worthy of attention. "Poster ink" is a very vague term. I can only say that in my opinion the "best" ink is just about good enough. In fact, this applies to all material.

The care of types in the poster room is too often sadly neglected. The proper cleansing, effecting the removal of all ink after use, is a factor in the life of wood type. The storage and racking, and prevention of bruising and batters, I need hardly emphasise. The idea prevalent years ago that any old jobbing founts and material that had served their time in the job department could be utilised in the poster room to advantage, has probably done as much to retard the advance in letterpress posters as anything.

I find I am wandering into a lecture on poster production, and this would be presumption on my part, as most of those present to-night know all and more than I can teach them; but, as I told you at the beginning, I desired to place a few thoughts before you that came to me in my endeavour to define a letterpress poster, a few notes made at random with the idea of provoking discussion in the hope that I may learn much that I do not know of a subject that has been sadly neglected by printers and those who furnish us with technical literature.

I have deliberately refrained from reading any articles or books on letterpress posters—first, because I wanted to commit my own ideas to paper, and obtain a jumping-off ground for arguing with myself later; and, secondly, because, as far as I know, there are none. There may be, I hope there are, and, further, I hope that the subject may be one sufficiently alluring to induce someone more competent to devote a little consideration and time to it.

Witherby's Annual Dinner

On Saturday, January 3, the annual dinner of the well-known and old-established firm of Messrs. Witherby & Co., law and general printers and stationers, was held at the Falstaff Restaurant, Eastcheap, Mr. Harry F. Witherby being in the chair, and Mr. G. W. Witherby in the vice-chair. The toast of the firm was proposed by Mr. W. T. Newman, works manager, to which the Vice-Chairman replied, and in the course of his remarks said he took the opportunity to offer the sincere congratulations of the firm to the staff, etc., on the year's working, and declared that it was only attained by comradeship and perseverance of all, and assured them that both to his brother and himself it was a very real and justifiable satisfaction. During the evening Mr. Thomas F. Witherby, son of the senior partner, was introduced to the company; his health was proposed and suitably replied to; also a presentation of a gold watch and chain was made to their principal draughtsman and illuminator, Mr. Syd. C. Davis, on the completion of 40 years' service with the firm.

Printing Trade Deal

Charge of Fraud Quickly Dismisssed

AFTER a hearing extending over four days and lengthy arguments of eminent counsel an action for damages for fraud brought against Mr. A. G. Gronow and others in connection with the sale of the business of Messrs. Burrup, Mathieson & Sprague was dismissed after a few minutes' deliberation by a special jury in the King's Bench Division on January 19.

This verdict justifies Sir Edward Marshall Hall's statement in his speech for the defence, that this was an action which never should have been brought.

The case was heard before Mr. Justice Shearman. It was an action brought by Mr. Gerard John Mathieson, of Margate, who sought to recover from four defendants damages for loss which he said he had suffered through fraudulent representations made in the sale of a stationer's and printer's business. The defendants were Mr. Albert George Gronow, of Hatch End, Middlesex; Mr. Percy Gilbert Bryant, of Lonsdale Avenue, Wembley; Mr. George Woodfall Bourne, of Bellfield Avenue, Harrow Weald; and Mr. William Harrison, solicitor, of Radnor Place, Hyde Park.

Sir R. Coventry, K.C., and Mr. A. F. Clements appeared for the plaintiff; Mr. Jowitt, K.C., and Mr. Giveen for the first three defendants; and Sir Edward Marshall Hall, K.C., and Mr Giveen for the defendant Harrison.

The plaintiff's case was that on February 16, 1923, Mr. Gronow, on behalf of himself and the other defendants, agreed to purchase for £65,000 the business of Messrs. Burrup, Mathieson & Sprague, Ltd., manufacturing stationers, of Southwark Street, S.E., in which he (the plaintiff) held the greater portion of the shares. The plaintiff complained that a few days later he and his wife were induced to sign a document by which they agreed to accept much less advantageous terms, as it was falsely represented to them that Messrs. Coutts & Co., the bankers, had offered to sell to the defendants some of the shares which they held as security for a loan of £12,500 they had made to the plaintiff.

The defendants' case was that no bargain of any sort was made on February 16, and that what took place was a preliminary conversation about the matter; that no sum was mentioned. Further, that on February 20, at Mr. Mathieson's own office an agreement was reached to buy the shares at a certain price, that agreement was embodied in a document signed by Mr. Mathieson. It was then disclosed that part of these shares were in the hands of the Public Trustee, as security for alimony for Mr. Mathieson's first wife, and part were pledged with Coutts' Bank for money owing. It was further disclosed that the shares held by Coutts had been made over by an ante-nuptial settlement to Mr. Mathieson's present wife. The evidence for the defence was that on February 21, when Mr. Gronow and his solicitor, Mr. Harrison, met Mr. Mathieson at his office in Southwark Street, the latter said he was not prepared to sell, that he had a better offer, and that his signature to the document of the previous day was not worth a damn, because the shares were in the name of his wife. Mr. Gronow thereupon said he was not going to be treated in that way, and said he would go to Coutts and make them a similar offer to that already made. Mr. Mathieson, it was alleged, immediately climbed down, sent for his wife, and they both signed the agreement to sell.

Sir Reginald Coventry, K.C., opening Mr. Mathieson's case, said Mr. Mathieson was managing director of Burrup, Mathieson, Sprague & company, printers and stationers, and was interested to the extent of nearly three-quarters of the capital of the business. The assets of the company, Mr. Coventry continued, had been valued at about £106,000, and as the issued capital of the preferred and ordinary shares was only about £40,000, the value of the deferred shares was very considerable.

Mr. Mathieson's first marriage was unhappy, and was dissolved by order of the Court. To secure alimony for his first wife he deposited some of his shares in the company with the Public Trustee. The balance of the shares he brought into the marriage settlement he made with his present wife. On these shares he borrowed from his bankers, Messrs. Coutts, £12,000. In December, 1922, Coutts were pressing for repayment of the loan. A bargain for a sale at £65,000, with a service agreement worth £5,000, was reached, but a week later Mr. Harrison told Mr. Mathieson that Messrs. Coutts intended to sell next day the shares they held as security if Mr. Mathieson did not accept an offer of £45,000 instead of £65,000. Mr. Mathieson and Mrs. Mathieson were induced by this representation to sell the whole of their holdings to the defendants, and Mr. Mathieson estimated the damage he had suffered at £15,000.

Mr. Mathieson, said Mr. Coventry, learned afterwards that Coutts had no intention of selling the shares behind his back.

Evidence was given by Mr. Mathieson.

Cross-examined by Sir Edward Marshall Hall, K.C., he admitted that just before 1913 he was in financial difficulties, and borrowed money from his brothers and transferred shares to them. In 1913 he disappeared, leaving no address. Some time later he came into the business again as director, and in 1922 and 1923 was trying to sell the business.

Evidence was given by all defendants, who emphatically denied that any threat or duress of any kind was brought to bear upon the plaintiff, and who testified to the signing of the agreement on the day before the alleged misrepresentation was made.

Sir Edward Marshall Hall, who appeared for Mr. Harrison, the solicitor who acted for Mr. Gronow throughout the negotiations, addressed the jury on behalf of all the defendants. He began by saying he doubted if ever there had been launched in the Courts of Justice a charge of fraud upon such slender material as had been offered for their consideration. He then went on to show how serious such a charge was, both

against a solicitor of many years standing and against the other three defendants. They were obliged to resist it to the utmost, and a verdict against them, even with paltry damages, would be a most serious calamity. He (Sir Edward) had no shadow of doubt that this was an invented charge. It was the charge of a man, admittedly hard up, in financial difficulties, threatened with writs by the bank and by the directors of his own firm, from whose accounts he had overdrawn monies to which he was not entitled, a man who, having made a bargain some months later thought he ought to have made a better one, and then launched this action.

If the jury believed the story which had been told and corroborated as to the signing of the agreement to sell on February 20, at an agreed price, then the case was at an end, because it was not suggested that the document was signed other than willingly. If it were suggested that the price paid for this business was small compared with its reputed value, they had to remember that this was a printing and stationery business. It might be valuable to men like Mr. Gronow and his colleagues—men of ripe experience in the trade. It was not the sort of business which could be sold to the public—but only to men who knew how to run it—men with expert knowledge. Sir Edward proceeded to examine the evidence which had been offered, and concluded with an eloquent appeal to the jury for the most careful consideration of such a serious charge.

Mr. Justice Shearman began his summing up of the case on Friday afternoon, but he said he objected to hustle in a matter of such importance. He continued on Monday morning, quite early dismissing from the consideration of the jury Mr. Bryant and Mr. Bourne, who were merely interested in the deal as being associated with Mr. Gronow, but who could not be said to have any responsibility at all for the alleged misrepresentation. In a review of the evidence his lorship stressed the importance of the vital document said to have been signed on February 20 before the suggested pressure took place, and pointed out that letters sent out to other shareholders offering 15s., 17s. 6d. and £3 for the shares, which it was admitted plaintiff had seen and approved of, was inconsistent with any bargain of the nature alleged in the pleas. The questions left to the jury were as to whether they were satisfied that any fraudulent statement that they were in a position to buy the shares over the head of Mr. Mathieson was ever made by the defendants, and whether there was any definite agreement come to on February 15 between the parties for the sale of the business.

The jury returned a negative answer to both these questions, and a verdict for the defendants, with costs, was entered.

Mr. Percy W. Kennett

Mr. Kennett, who for many years has been a director of Spicers, Ltd., and connected with that firm for 38 years, has become a partner of Messrs. Herring, Dewick & Cripps, paper merchants. Mr. Kennett was entertained to a luncheon at the Reform Club by the directors of Spicers, and was the recipient of valuable gifts before severing his connection with his old house.

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CHAPTER IV.

IMPROVING LIGHTING.

THE lighting of a printing works is a matter demanding very thoughtful consideration, owing to its immediate influence upon output, quality, bodily welfare, eyesight and sanitation. From every point of view it is necessary to secure as good and ample a light, both natural and artificial, as the circumstances can be made to allow. Where, during the hours of daylight, the inflow of natural light is inadequate to meet the requirements of the workers and processes, artificial lighting must be resorted to, with consequently increased costs of production and diminished output. In many cases, the supply of natural light can be increased by effecting structural alterations or introducing arrangements calculated to collect or intensify the available illumination. The following methods may be suggested, accepting in the first place that all existing windows and skylights are regularly cleaned, *i.e.,* at least once every month in crowded centres. In top storeys, skylights fitted with prismatic glass may be introduced, or existing skylights may have prismatic glass substituted for old material. The possibility of removing a portion of the roof and erecting a glass lantern can be considered. Floors directly beneath the roof may be converted to the well-hole principle, if conditions allow. Exposed walls may permit the introduction of extra windows; existing window frames may be made larger, or unsatisfactory types may be replaced by windows calculated to secure the maximum amount of light, distribution being aided by lower panes of prismatic glass, or by deflection through the agency of reflectors. Dark walls and surroundings absorb light, whereas light surfaces reflect it; hence the value of whitened ceilings, walls and columns. In regard to window space, it is important to observe the relative proportion of window height to room width. A room 14 ft. 6 in. from floor to ceiling, naturally lighted from two sides, would not permit penetration throughout if the width exceeded 60 ft A building of 80 ft. width would require a height of 17 ft. to secure permeation. In every case the windows should extend from within a few inches of the ceiling to within 2 ft. 6 in. of the floor.

The quality of natural light depends mainly upon its aspect, and in the case of colour printers, artists and process workers generally, some regard should be given to the condition most appropriate. Direct sun rays are hurtful to the eyes, create headaches in the case of close working, and constitute an obstacle to colour matching. A due South aspect represents the maximum amount of sun and glare. A north aspect presents a diffused light entirely free from glare and rays, and secures ideal conditions for colour work, the values of the colours being revealed in their true relationship. Hence the construction of the modern one-floor factory roof on the saw-tooth principle, with the vertical glass surfaces facing north and the slanting ceiling whitened to reflect the diffused north light downwards into the working area.

In a general jobbing office, light quality may not be so important, but it is advisable where conditions are otherwise suitable, to allocate the northern end to the chromo-litho or colour-printing departments. Attempts have been made to provide artificial light of the same character, but not with entire success, the nearest approaches to perfection being the mercury vapour lamp and the indirect electric lighting system arranged with specially-devised fittings.

In considering the value and effect of artificial light, it is helpful in forming opinions and decisions to have regard to the structure and functions of the human eye. The iris of the eye is best likened to the diaphragm of a camera, opening or closing down in correspondence with the intensity of light and glare. Flickering lights and varying conditions of illumination impose a strain on the iris, which in turn affects the retina, the latter playing the part of the camera film in receiving the image or impression. Over-strain on the iris promotes headache and eyestrain.

The problem facing the printer is how best to overcome the difficulties of lighting in order to ensure comfort and individual welfare while securing maximum efficiency, economy and production. Ideal conditions of lighting would be constituted by adequate illumination over the area of work, sufficient clear light on the operating points of machinery, uniformity and constancy of illumination, freedom from glare at the source, avoidance of violent contrast, suitable types of lighting, and clearly-lit passages, stairways and danger zones. The importance of adequate illumination is well borne out by official records of accidents, which show that they are more numerous by 40 per cent. in the presence of artificial light, and that the great majority are caused by moving machinery and through persons falling over obstacles, etc. Insurance companies' records prove that the number of accidents rise in a curve corresponding to the diminution of daylight hours. The U.S.A. Industrial Commission ascertained that in one provincial city alone the cost of accidents due to poor illumination amounted yearly to £200,000. Considering that the cost of maintaining an efficient lighting system rarely exceeds 1 per cent. of the cost of production in a printing works, it is an unwise policy to restrict the scheme below the limit of adequacy.

In planning a scheme of artificial illumination for the works, the printer has generally the choice of two main sources—gas and electricity. Until recently, illumination was installed with very little regard to the principles of lighting, but modern industrial management has advanced far enough to regard the subject as one governed by scientific principles, and it is in accordance with such principles that modern schemes should be planned.

Regarding the older form of gas lighting, it may at once be observed that the open or fish-tail burner type is condemned on all grounds as being wasteful, expensive, inefficient and inimical to health. The burning of gas is a chemical operation involving the abstraction of oxygen from the atmosphere and the formation of carbon dioxide and sulphur dioxide, both of which gases unite with atmospheric moisture, the one forming carbonic acid, and the other traces of sulphuric acid. Thus the air of a workroom becomes contaminated with traces of poisonous matter inimical to health. Apart from the influence upon bodily welfare, gas is dirty in effect as compared with electricity, and detracts from illuminating efficiency by blackening the whitened surfaces of walls and ceilings.

Incandescent gas lighting is an improvement on open gas burners, especially if the type known as the factory burner is employed. Illumination is vastly increased at less cost, but the upkeep of mantles, globes and fittings is a considerable item of expense. In common practice, the light loses at least 25 per cent. of its efficiency through careless and uncleanly maintenance, broken mantles and blackened globes and reflectors constituting a too common feature of the system. Compared with the open gas burner, incandescent lighting gives 15 candle-power per cubic foot of gas, as against 3 candle-power per c.f. Thus there is theoretically five times the efficiency at equal cost plus the maintenance of fittings, which constitutes a somewhat serious item of expense.

Choice of an alternative method of illumination by gas is provided by the intensified or high-pressure system, in which the suction plant described under the heading of power is employed. An extremely powerful light is secured at low cost, but the colour and character of the light is not well adapted to printing and allied processes. The cost of pressure gas, not taking into account the expense of plant and maintenance, works out at one-sixth that of coal gas from the main. For intensive illumination over large areas and for flat general work, the system has undoubted advantages, but for localised illumination it is unsuitable.

Of available methods, electric lighting is by far the most suitable in every way for the printing and allied industries. It is adjustable, in that the intensity of illumination may be varied at will between 16-c.p. and 200-c.p. per lamp. The danger of fire is lessened by the elimination of exposed flame and the use of naked lights. A greater efficiency is secured at less cost, as for instance the following comparison: —

Half-watt lamp: 1,000 candle-power hours—½ unit with current at 7d. per unit—3½d.

Incandescent light: 750 candle-power (actual)—88 cubic feet of gas at 4s. per 1,000 c.f.—4¼d.

Greater cleanliness and more healthy conditions are ensured by the freedom from smoke, fumes and dirt. Illumination is rendered more constant, and may be more easily and quickly directed to the exact point where needed. Finally, the quality and character of electric light is superior to that embodied in any type of gaslight.

There is a wide range of choice in the selection of an electric lighting system, but the requirements of every office are mainly governed by the structural features of the building, its internal arrangement and decoration, and finally by the class of work undertaken and the classes of machinery employed. No set plan of lighting can be authorised, but guiding lines may be given which will suggest the suitable methods to be adopted in each individual case.

Fundamentally there are three systems of lighting by electricity, *i.e.*, direct, indirect, and semi-indirect.

Direct lighting is furnished by lamps fitted with opaque reflectors, the light being reflected downwards over a given area controlled by the height and power of the lamp and the angle and diameter of the reflector.

Indirect lighting is provided by lamps hung in opaque bowls at a regulated height from the ceiling, the system depending upon the character and colour of ceiling and walls for downward reflection and diffusion over the whole area beneath.

Semi-indirect systems are a combination of the two foregoing, comprising a high-power lamp hung in a translucent bowl or container, the light being reflected and diffused from the ceiling and walls, while at the same time a certain amount of direct light is transmitted through the bowl.

Direct lighting may be performed by small local lamps or in a more general manner by half-watt or arc lamps according to circumstances and requirements, but in any case glare to some extent is an almost inevitable accompaniment of direct systems. The indirect and semi-indirect systems demand high-power lamps, and overcome the glare at a sacrifice of brightness. In point of quality and freedom from ill-effect, these types of lighting are infinitely to be preferred, but the permissibility of their application must depend on environment and cost. A semi-indirect lighting system certainly costs much more to instal and maintain than a direct system, and in the average printing office there is only a limited amount of opportunity for securing maximum efficiency therefrom. In actual practice the best results emanate form a combination of methods regulated to suit circumstances and individual requirements. Indirect lighting is at a disadvantage where clear illumination is required at given points in machinery. All the value of light goes if shadows are thrown by projecting portions or by the machine operator. Direct local lights have the advantage that they can be arranged and adjusted to any position, more especially if fitted with counterweights. A further point in favour of the direct local light is that when the circumstances are such as to require very little lighting (as in working overtime on an odd machine or two), the demand can be economically met. There is no economy in burning a 200-c.p. lamp if the work can be done under a pair of 32's.

With reference to conditions, direct lighting is helped by white and even walls and ceilings, but is not dependent upon them. Indirect lighting depends upon them, and loses its value where obstructions (as beams, rafters, darkened roofs or ceilings, shafting, belting, racks, cabinets, etc.) prevent reflection and diffusion. Overhead difficulties may be overcome by equipping the fittings with large hood reflectors, but the effect of violent contrast of light and shade is introduced. Semi-indirect lighting depends less upon overhead whiteness, but sacrifices a great deal of its value without it.

In the absence of favourable surroundings, direct lighting provides the most economical and efficient scheme, and permits of variation to meet the different requirements of the departments. In the composing room the frames are best illuminated by

32-c.p. lamps, hung 7 ft. 6 in. from the floor, provided with a 10 in. opal reflector and arranged singly between each two workers immediately over the apex of the frames. General illumination in the shape of half-watt lamps, hung high, should be schemed for all open areas, store cabinets, imposing surfaces and proofing presses. If the ceiling allows, it is an undoubted advantage to introduce semi-indirect lighting here for the sake of eliminating glare, which in time may become hurtful to the vision of certain compositors. Typesetting machines should have local lights (60-c.p.) fitted with counterweights.

The machine-rooms are best illuminated by a similar combination of local and general lights. Wharfedale machines below demy size are amply provided for by a single 32-c.p. lamp. Above demy two similar lights are necessary, disposed one over the feed table and one over the delivery and ink-duct end. Cutting-out and overlay desks require a lamp fitted with counterweight. Two-revolution and overhead-feed machines call for additional light below the feedboard, which may either be schemed separately or secured by a judicious arrangement of passage lighting. Groups of small platens should be illuminated by general lights (half-watt) at regulated distances close to the ceiling. The effect of lofty general lighting is to help also in illuminating the area above the local lamps.

In the machine-room especial attention should be given to danger zones, such as the passages between backs of machines and between rows of belt drives, floor motors, etc., It is in these areas that dark shadows are most likely to be cast through over-zealous attention to local light on the machinery and forgetfulness elsewhere. The combination of general and local lighting is devised to make a comprehensive scheme covering every square foot of space.

In the chromo-lithographic department efficiency is again best secured by fitting a combination of general and local lights, the transferring side being illuminated by local lamps with counterweights for artists and stone or plate workers, with a well-regulated distribution of half-watt lamps close to the ceiling for general illumination of the whole area. In the machine-room, flat-bed machines are best provided for by a system of half-watt lighting, augmented by local lamps reflecting beneath the feed boards. For rotary presses high candle-power lamps front and back, fitted with counterweights, will enable the operator to eliminate shadows on the lower periphery of the cylinders.

For the warehouse and miscellaneous department all table work should be illuminated by a scheme of general lighting, *i.e.*, high-power (preferably half-watt) lamps hung at least 10 ft. from the floor, and fitted with 16 in. reflectors to shield the glare and give a wide angle of distribution. The small machinery inseparable from the modern warehouse, miscellaneous room or sewing and making-up department, should be fitted with local lighting, and in the case of machines involving close work at a given point (as paging or machine booksewing) counterweights should be provided.

Ruling and bookbinding lends itself to a scheme of general lighting, but finishing operations should be carried out under the more carefully-directed illumination from local lamps with counterweight fittings.

Given more ideal conditions, in the form of smooth and whitened ceilings and walls, the whole of the general lighting could be performed by the semi-indirect system, using large opal bowls and the new type of watt lamp. It is assumed that the ideal conditions would include direct motor driving and the elimination of overhead shafting, hangers, belting, etc., otherwise the scheme would be marred by shadows and absorbed light. In any event local lighting for many of the machines in a printing office becomes an absolute necessity.

In all electric lighting systems the arrangement of switches is a supremely important matter. Tap switches on the fitting of each light are inefficient and extravagant in that they make for broken filaments and interfere with the adjustment of heights. It is advisable to hang lamps (except upon exceptional circumstances) no lower than 7 ft. 6 in. from the floor, thus preventing unnecessary handling and lengthening the life of bulbs. The best position for all switches is on the wall close by the users of the particular lights. The number and position of lights on each switch should be carefully regulated to avoid the needless burning of current. As few as convenient is the best policy, and though the initial outlay may be slightly greater, the ultimate economy will repay the cost many times over.

We understand from Mr. Edward Crone, the South of England representative of the Victory-Kidder Printing Machine Co., Ltd., of Birkenhead, that the London headquarters have been removed from 66, Houndsditch, to more convenient offices in Blackfriars House, New Bridge Street, E.C.4.

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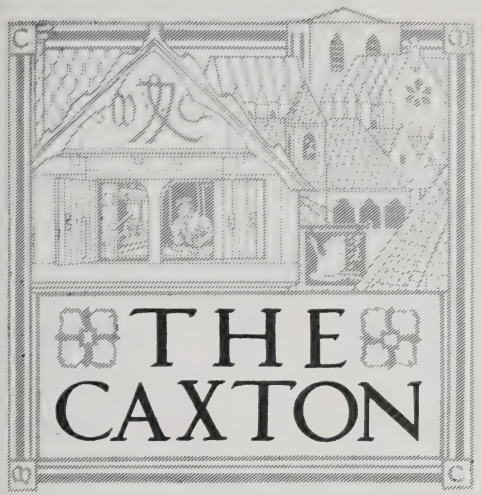
(Wharfedale Printing Machines and Self-Clamp Guillotines.)
Middows Bros. & Linton, Ltd., Sydney and Melbourne (Box-Making, Binders' and Stereo Machinery &c.)



London, February, 1925

A REMARKABLY comprehensive presentation of the present state of the printing business in the United States and Canada, presented to the convention of the United Typothetæ is most suggestive to printers everywhere. A carefully prepared analysis based on statements submitted by about 300 printers who operate standard cost finding systems showed that the average net profit in every dollar's worth of printing sold in 1921 was 9 cents, in 1922 6 cents, in 1923 under 4 cents. This declining ratio of profit proves that the printing industry is in a bad way. It would be almost impossible to get such complete figures in this country as those upon which these deductions are based, but the causes which led to this decline—at least many of them—are operative here just as much as there. This, then, seems clear :—

There is altogether too much estimating. In our eagerness for business we are apt to estimate on anything, or rather everything, with the result that we are encouraging our customer—or someone else's customer—to shop. What he gets as a result of poor estimating is a lot of tenders which make the industry look foolish. We have had recent illustrations of how few printers know how to build an estimate. Hours based on the experience of an expert craftsman are dangerous—the more expert the craftsman the more dangerous the estimate. Estimates of hours used on any operation should be based on past production records.

The average printer does not attempt to maintain an even margin. He gets an abnormal profit where he has the opportunity and, when in competition, goes to the other extreme of selling at cost, or below cost. The result is that the general average is below what it should be.

We quote in full the conclusions drawn from this report by Mr. Ad. L. Lewis, of Toronto :—

" We submit that the requisites for successful marketing are :

First—Knowledge of Cost.
Second—Knowledge of Equipment.
Third—Knowledge of Performance.
And, Finally—Knowledge of Market Possibilities.

" Equip yourselves and your salesmen and train your boys in these fundamentals.

" Printing is getting beyond the mechanical stage. It is shifting from the hands to the head. We seriously need more men who think.

" You chief executives will have to get away from the idea that printing volume can be increased without really intensive and constructive application. George Horace Lorimer tells us that Judgment, Vision, Imagination, Courage and Experience are the requisites for efficient management. Might I presume to suggest that the least of them are not vision and courage.

" We cannot any longer be contented with the work our customers will have to order—we must show them how they can profitably use more. The one expense we cannot curtail is selling. We must spend money on research work, and when we have helped sell goods we must tell the world about it, passing on such information to only those who would be interested in the story we have to tell.

" Salesmen must readjust their vision, if they have any—if they haven't, they must get it. They must study, not their customers' orders but their customers' problems. And they must think and work. They will need your help and encouragement.

" The wise manager will spend a good portion of his time with his salesmen studying the needs of his present customers and carefully combing the field for prospective new ones—always selecting those he can really help and those who can pay for it.

" The successful printer, ten years from now, will be the one who has come through with enough sane, sound common sense and originality to eliminate competition and has had courage enough to charge what it was worth to the customer.

" The only way to sell more printing at profitable prices is to develop a class of printing that business cannot help buying, and there isn't a big business in America which couldn't profitably use more printing."

W·CAXTON·WYNKEN·DE·WORDE·R·PYNSON·T·NOTARY·R·GRAFTON·R·FOULIS·T·RUDD·R·PROCTOR·T·DAVIDSON·T·BERTHELET·J·LETTOU·J·SCOLAR·J·DAY·J·OKEHARDEY·BYNNEMAN·W·MACHLINIA·W·BULMER·E·WHITCHURCH·U·MYLNER·J·SIBERCH·J·SCHOLOKER·W·MORRIS·J·BASKERVILLE·C·WHITTINGHAM·J·PINE

CRAFTSMAN'S CORNER

Devoted to plain, homely talks about Letterpress Printing. Design, layout, type, composition, illustration, paper and ink will all receive attention as occasion demands; and Specimens sent in for Review which contain features of special merit or interest will be reproduced in these columns.

CONDUCTED BY H. B. NAYLOR.

SIMPLICITY OF TREATMENT IS THE KEYNOTE TO SUCCESS IN TYPOGRAPHIC DESIGN. Let us have a little talk around this phrase, and, in endeavouring to analyse its meaning, formulate a real constructive policy as a guide for display work.

The first essential to a sucessful piece of printing is language (the copy) suitable to the purpose to which it is to be applied.

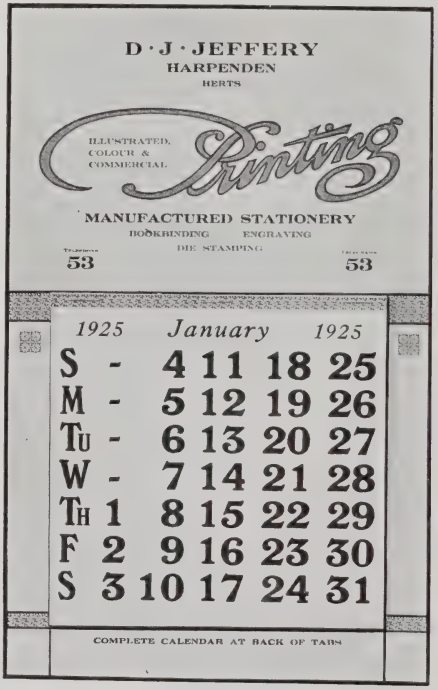
No printer—and printers generally are looked upon as fairly well-educated men—should pass copy forward to the workroom which is ungrammatical or badly phrased. The reader and compositor take the responsibility of making such corrections; but, unless there is an understanding "in the house" to that effect, the blame cannot legally be placed upon them for such inaccuracies. Humour and dialect come under an entirely different category, and in these circumstances it must be assumed that the author fully accepts responsibility.

But in serious language, such as sales talk, the copy should be simple, direct, and grammatically correct—with an occasional licence in phraseology which may have been popularised by tacit acceptance and understanding on both sides. To meet this position of affairs, there should be some person responsible in every printing office for checking the accuracy of copy; and, as it should be the printer's prerogative to advise his customer in all branches of the finished product, so also should the printer be prepared to advise on suitability of copy for the job. Surely, with his vast experience in handling printed matter for almost every kind of business, he should possess intuition and experience that should tell him right from wrong. Intimate craft knowledge should also place him in a superior position to the ordinary advertising man—certainly much in advance of the average buyer of printing—and the sooner this is realised and acted upon, the better service will the printer be able to offer.

Viewing it on a single-page display basis, there should not be too many points requiring emphasis. One, or at most two primary features should be sufficient; the contrast in size of type will help the subsidiary items to convey their message. In other words: reducing the number of main features in the wording to a minimum is the first step towards simplicity—yet this need not in any way affect the substance of the wording.

Next we come to the layout, either visualised or drawn. How does simplicity of treatment apply here?

Simplicity in typographic design does not necessarily mean that the job must be in plain roman type, without any border or decoration, and all run on. What it is intended to convey, however, is that the groups of type and decoration should be



EXAMPLE 14—D. J. JEFFERY

Actual size 12×7¾ inches. Entirely letterpress. Advertisement is set in Engravers Roman, date pad in Old Style No. 5 Italic, Windsor figures, days in Windsor Condensed. All type, rules, Old Flowers, and outline of "Printing" are printed in dark blue on light blue crash finish stock, the only other colour (brown) forming a solid background to the drawn lettering. A fine study in grouping, with plenty of room for free treatment. The "Pr" in "Printing" loses a trifle in legibility; but otherwise it is a good, serviceable calendar, with a bold and clear date pad

arranged in such a way that they have a sympathetic relationship to each other—the decoration *helping* the type, *not* dominating it—to convey the message in a manner that can be visualised and comprehended at a glance.

Example 15—Lydall & Son
Actual size 16½ × 10 inches. Entirely letterpress. The Stuart-Barker two-colour illustration is mounted separately on a thick board with black bevelled edges. Set in Spartan Bold, Saxon Black, and Cheltenham Italic, and printed in black on green-grey tinted card with white bevelled edges. Calendar pad is on white stock, with 1925 embossed in gold. Ornamental as well as useful, with a good colour scheme and shape harmony, this might be termed a topical calendar, the slogan "Now for it!" being particularly suggestive, and appropriate to the present state of trade.

At the moment of writing I have before me an 8vo handbill issued by the proprietor of a local garage, and in this bill there are eight different series of type, several of them clamouring for attention at the same time!

If, owing to the arrangement of the composition, the eye has difficulty in finding a starting point, it passes on such indecision to the brain; the brain in its turn refuses to function properly, to the detriment of the owner of the garage. But supposing there had been only one special feature, the remaining items being exprssed in, say, two or three groups of type, the eye would have been easily led, the brain would have grasped the import easily, and the bill more likely would have been read through—*without conscious effort.*

There is a wonderful lesson to be learnt in the study and treatment of newspaper headlines. The editor does not tell you everything in them—though very nearly sometimes!—but he is most careful to whet your appetite for more.

One would think that, in these days of type families, the indiscriminate mixing of display types would be a thing of the past. Type families, as we understand them to-day, commenced their career of popularity nigh upon twenty years ago; so that the printer who still uses those old-fashioned Tuscans, Monumentals, and Ornamentals should by now be in a position to scrap them. But why does he still cling to them? I suggest because it is actually easier to present a jumbled-up mass of display than to turn out a simple, pleasing, and attention-compelling job. As already hinted at, simplicity in typographic design is not so simple as it looks in the finished production. It demands greater care in thinking out, greater care in execution, and a greater appreciation and understanding of the message to be conveyed. Therefore, to be successful, keep to as few series of type as the office equipment will allow, remembering that where decoration is to be introduced: if all is in one colour, there should be tone harmony between decoration and type; if in more than one colour, so treat the decoration that the type is helped and not competed against. Decoration cannot be read, so its evident purpose must be to assist the reading matter, and not outvie it.

W. Mark & Co., Ltd.
27 THE DRAPERY, NORTHAMPTON.
Printers, Bookbinders, Lithographers, Rulers, and Manufacturing Stationers.
General Printing. Cash Books. Account Books ruled any pattern and bound any Style.
With Compliments from
W. Mark & Co. Ltd
23 24
28 29 30 31

Example 16—W. Mark & Co. Ltd.
Actual size 14¾ × 11¼ inches. Entirely letterpress. The Cube Border is printed in green; "W. Mark & Co. Ltd." and underscoring of smaller type in red; illustration, smaller type, and Cube Border used as cut-offs in black. Set in Old Style No. 5. A brown surface card has been used, with monthly calendar pad on buff stock—the flap of which has been purposely turned up for above illustration to show the Bold Latin Condensed figures. The omission of the comma after "Co." in headline would have helped the spacing. This is essentially a business calendar, with a strong colour combination, intended to be seen and read at any reasonable distance.

Spacing and whiting out play a most important part in display work. Symmetry of design—*i.e.*, a division into equal proportions—is not to be recommended, because it conduces to monotony. Harmony of shape, proportionate masses or groups of type, tone harmony in type faces, sympathy of treatment, and balance of white space, will all lead the eye gently on from beginning to end without effort.

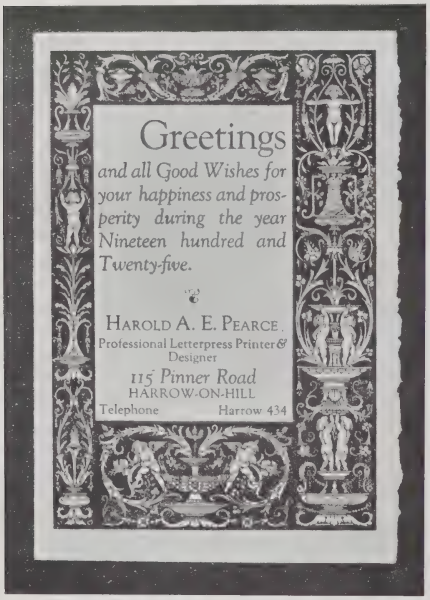
Where period work is sought after, then period material must be used. The purist would never dream of trying to imitate the style of William Morris with modern roman type, an ordinary floreated text initial, and, say, Westminster Page Ornaments! Fancy trying to emulate Geoffroy Tory with Tudor Black, Sans Serifs, and Tuscan Border! And yet all these materials have a definite use. But modern materials must have modern treatment.

Why have the foundries of the world and the composing machine makers been so prolific during recent years in the resuscitation and production of Old Flowers, Borderings and Ornaments? Because the development of the type face has taken on a simpler form, and designers have had more direct resource to the copying or drawing of letters based on the early Continental school. To use such type and decoration together produces simpler results (though not always quite so simple in execution) because of the harmony of one with the other; the senses are soothed instead of being irritated by such combinations: hence a truer form of art without visible effort.

This, in a nutshell, is the basic outline of simplicity in typographic design; there may be some points omitted which present difficulties to my readers—if so, drop me a line and state your case, and I will do my best in a subsequent issue to deal with your problems.

All specimens for review in "Craftsman's Corner" and all correspondence for same should be addressed direct to H. Naylor, 8, Aubert Park, Highbury, N.5.

I must thank my many friends for the encouraging letters which have accompanied their specimens sent in for review under "Appreciations"; and to these specimens I propose to devote the remainder of the space at my disposal. Interspersed among the text a few of them have been reproduced; but this in *no way* reflects on those which are not shown, because there is not one which is not a credit to the producer—but it is really impossible to show them all.


Greetings
and all Good Wishes for your happiness and prosperity during the year Nineteen hundred and Twenty-five.
HAROLD A. E. PEARCE
Professional Letterpress Printer & Designer
115 Pinner Road
HARROW-ON-HILL
Telephone Harrow 434

EXAMPLE 17—HAROLD A. E. PEARCE
Actual size 6½×4½ inches. Entirely letterpress. Print only on the first of four pages, this is a New Year business greeting card—all being in black except the word "Greeting" and the small ornament, which are in red. Set in Goudy Old Style Roman and Italic. The third page has been double slotted for just over half the width, and in this band has been inserted a neat little vest pocket calendar for 1925. This is a simple, but quite effective piece of printing, and presents an old subject in quite a new form.

APPRECIATIONS.

BAYNARD PRESS.—Thanks for your fine specimens. I hope to deal with them more fully in our March issue.

W. S. COWELL LTD., IPSWICH.—Congratulations on your handsome calendar. The letterpress colour reproduction of the Constable picture, "The Hay Wain," makes it a work of art, the canvas finish to the stock on which the picture is painted giving a realistic touch. The general colour scheme is good, the red and black name and address giving prominence without aggressiveness. The daily tear-off (and their maxims) compel attention to your "readiness for service" by regular personal contact and "daily" impression of good work well and attractively done. The tear-off postcard asking for acknowledgment of receipt of calendar and its condition on arrival is a brain wave, and could scarcely be refused.

A. E. C. (LONDON).—Your heading shows great promise, but it is colour weak. There is not enough firmness in the general design, the amount of decoration partly obscures the lettering, and the whole is too monotone in effect. The idea of linking the name of the firm and the style of lettering is correct, but it ought to be much better drawn, and is not good enough for the business of a showcard and ticket writer and printer.

The programme possesses strength but lacks punch. In this example it may not be so important, but the principle applies just the same. The "Admission by Programme" and "Prices 9d., 6d. and 4d." lines should have been made into one line same length as "Concert," so as to give greater stability to the base in particular and to the job as a whole. Take care not to use cube rules as cut-offs indiscriminately, lest you overdo it. Plain rule would look better.

The handbill is better, but is too evenly spaced out. The 4-line paragraph under the main line should have been in stronger type than roman—as it is at present, the ornament is too overpowering. The curved line at head carries no useful effect and gives extra work—such treatment is unnecessary here and out of date. If this was resorted to through lack of suitable type, I would suggest you instal some if you are going to handle this class of work.

Let me see some more of your work in six months' time.

COOPER & BUDD LTD., PECKHAM.—Your November issue of "The Peck-a-Mite" and its accompanying blotter are as crisp as ever. The homely chats on subjects of trade interest suggest a man who knows his business, and is willing to help others to make theirs a success—with just a little more up his sleeve in the matter of service and experience for those who are willing to give his printing a trial. "The Peck-a-Mite" is always well written and well produced, and is a standing advertisement of the work from this well-known Peckham printery.

D. J. Jeffery (Harpenden).—Your purely letterpress calendar is quite up to your usual standard of excellence. Colour scheme and design are most appropriate; the introduction of the word "Printer" in freehand presents an unusual treatment with force and character.

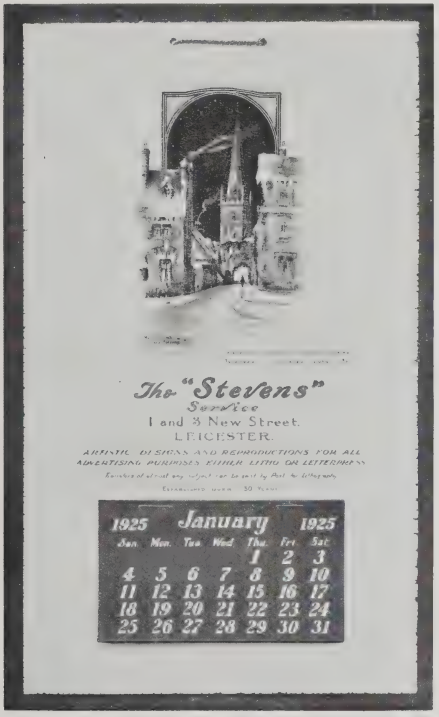
Lydall & Son (Dulwich).—Many thanks for your kind letter and a view of the revised label—my suggestion was only a minor one, but I hope you think it an improvement.

The two calendars you enclose are front rankers. The half-tone pencil sketch on Messrs. Spencer & Kent's looks very real; usually this style of picture is deep etched, but I feel sure you were right in not treating this so, because it would have interfered with the general colour scheme.

Your own calendar is very effective and most appropriate to the times in which we live. The illustration "Now for it!" is properly suggestive of "let us get on with the job." It is a fine example of two-colour work—and it is all the more interesting that the whole calendar was produced letterpress on the premises. I question the necessity of the "1925" at head—the year appears on each monthly tear-off. What is the cryptic sign on each "month" line?

You have certainly built up a business on the lines "not how cheaply but how well" you can print; and all your enclosures carry the conviction of work thoroughly well done.

McAllan & Co. Ltd. (Bear Alley, E.C.4).—The message on your calendar is short and sweet, and to the point—as befits an advertising printer—and makes excellent use of the Goudy Handtooled. The picture "At Sundown" has a charm of its own, and gives a fine finish.


The "Stevens" Service
1 and 3 New Street.
LEICESTER.
ARTISTIC DESIGNS AND REPRODUCTIONS FOR ALL ADVERTISING PURPOSES EITHER LITHO OR LETTERPRESS
1925 January 1925
Sun. Mon. Tue. Wed. Thu. Fri. Sat.
1 2 3
4 5 6 7 8 9 10
11 12 13 14 15 16 17
18 19 20 21 22 23 24
25 26 27 28 29 30 31

Example 18—The Stevens Service

Actual size 13¾×8¼ inches, including a dark brown mount, represented above by the black outside border. Entirely litho work. This is a handsome production, with a local view in many colours printed on very slightly toned stock. Some of the lines and lettering are rather close together. In the original there is a grey shadow line on the letters and between the first few lines, although this is not so pronounced on the reproduction. But it is a fine calendar, made all the more interesting by being the work of the principal, Mr. E. T. D. Stevens.

McKern's (Limerick).—Although printed in conventional blue and red, with orange under the blue, this is a most useful calendar, showing attention to detail and finish that should speak well for your work as a whole. The decorative head piece is quite good.

W. Mark & Co. (Northampton).—Your calendar is a very fine letterpress production, and I am glad to notice you have printed your own calendar pad instead of buying a stock line. The colour scheme is good, and should look as fresh in December next as it does now. The monthly calendar pad fits it for wall use, but you have taken the precaution to also make your name and business prominent, clear and decisive—a very wise procedure. As you are paying for the advertisement "you" are entitled to be seen, and you have done it well.

J. Miles & Co. Ltd. (Wardour Street, W.1).—I am glad to see your house organ "What Cheer" is maintaining its reputation for real wit and humour. The cover illustrations are excellent, particularly the drawing of "The Old Mill, Cathcart," by J. Macintosh, Senr.

The 300th Performance Souvenir of "The Farmer's Wife" is a work of art. It was a jolly idea to have photographs of the leading actors and actresses as they appear on the stage side by side with photos of them in private life.

Harold A. E. Pearce (Harrow-on-the-Hill).—Your New Year Greeting Card—with separate calendar attached to the third page—shows unusual treatment. The Westminster Page Ornaments in reverse have a rich effect, but were apparently very difficult to print on hand-made stock with uneven surface. It is typical of all your work—something different yet distinctive.

R. S. Owens is the professional name of a compositorial music composer, who during convalescence after a severe illness spent some time at the Printers' Convalescent Home at Limpsfield. What could be more natural and thoughtful than, as a joyful expression of thanks on his recovery and the splendid treatment received during his sojourn there, than that he should compose a jolly Fox Trot and name it "Limpsfield" in grateful remembrance. To the music-playing public this title conveys little, but in the printing trade "Limpsfield" is (or should be) a family word; and having heard this clever little Fox Trot played (I think it would also make an excellent Barn Dance), I can confidently recommend it to those musical fellow craftsmen who are always ready to encourage their comrades in good work. It is published at 2/- by the Stork Music Publishing Co., 49, Charlotte Street, W.1.

George Philip & Son, Ltd.—The British Empire Calendars should certainly be of use in the home, office and school. It is an education in itself on the seasonable products of the Empire month by month; and the monthly maps emphasizing the principal industries are most interesting, helpful and instructive.

W. F. Sedgwick Ltd.—Your London Landmarks series of Monthly Calendar Blotters maintain their reputation for interest, particularly the historical note attached to each. I was rather surprised, however, to find the January 1925 Blotter follows on exactly the same lines. In the interests of your business as process engravers, would it not have been better to start the new year by demonstrating other possibilities of the engravers' art? I make the suggestion that the blotters for the remaining eleven months of the year should each show a variation in process work.

The Stevens Service, Leicester.—Very happy in conception and execution are the Christmas Card and Calendar to hand designed by E. T. D. Stevens. All hand work, and printed litho offset in colours, the same Christmassy theme is used on both specimens, the picture representing St. Mary's Church and Castle Gateway, Leicester—thus the greeting card and calendar is en suite. The strong, rich, yet subdued colouring shows expert handling, and both are printed on cream coloured stiff cartridge finish stock, the card being finished off with pale gold ribbon; the calendar (with monthly tear-off) being mounted on a strongly marked linen finish grey-brown cover paper. Here is the work of a true artist, and hearty congratulations to him. The greeting card concludes with the following happy little verse signed E.T.D.S.

A WISH.

In friendship's name, outstretched this hand,
With all my heart and will;
May peace and plenty fill the land,
And God guard you from ill.

Waxed Papers Ltd. (Nunhead Lane, S.E.15).—The samples of bread wrappers you enclose are an eye-opener, and I should say they rank among the best work yet done in this country in the way of printed waxed paper. They are bright and clean looking, well designed and printed; and the method of production suggests they are by no means expensive, but rather a cheap form of advertisement for firms handling foodstuffs who are wise enough to use them.

H.B.N.

Printing Inks

Early history—pigments used—medium in which ground—method of grinding—introduction of aniline dyes—colour bases—types of inks—progress in manufacture—difficulties in printing—drying problems—questions of quality

LECTURE By Mr. ILSTON COX

THE fourth lecture of this season's series of lectures arranged by the Stationers' Company and the Printing Industry Technical Board of Studies was given on January 9. Mr. Alfred Langley presided. The lecturer, Mr. Ilston Cox, is associated with one of the largest and best printing ink manufacturing firms (Messrs. Shackell, Edwards & Co.), and there was the usual excellent attendance.

Mr. Cox said: It would appear almost unnecessary to say that the date when printing ink first made its appearance synchronised with the production of the first type. This, however, was not the case, as ink preceded type by several centuries, it being used on engraved blocks, on to the blackened surface of which the printing material was pressed by hand. Unlike the engraving of later years, the ink was smeared on to the surface of the block and not into the crevices, so that it produced an impression showing white letters or characters. The Chinese are said to have produced the first printed documents several years before Christ, but the earliest records of any value are as late as the tenth century A.D. It was nearly 500 years later that printing as we understand it came into being, and almost another two centuries before we find the first reference to the making of printing ink.

EARLY HISTORY.

It is interesting to note that, although a number of oils were tried in the early days for making printing inks, the one in use to-day, which, as you know, is linseed oil, was the one first used by the pioneer printers. There seems to have been a considerable difference of opinion in the seventeenth century as to whether it was better to boil the lamp black with the oil or blend it afterwards when the oil was cold and had assumed the viscosity of varnish. In those days printers made their own ink, and it was some time before they compared notes and decided that it was the better plan to grind the carbon into the cold varnish. In a book by Joseph Moxon published in 1683 we find one of the first references to the professional printing ink maker, and, as there is a touch of humour about his record, I will give it you in his own words:—

"The process of making printers' inck being both laborious to the body and ungrateful to the sences, and by several odd accidents dangerous of firing the place it is made in, our English master printers do generally discharge themselves of that trouble, and, instead of having good inck, content themselves that they pay an inck maker for good inck which may yet be better or worse according to the concience of the inck maker."

This is not a very good testimonial for the ink maker of Charles the Second's day, but according to Moxon, the printer of the Stuart period was little better, as we are told "that he would rather hazard the reception of an ill-printed sheet than take the pains to amend it, satisfying himself that he can lay the blame on the inck maker." Evidently this latter individual was a very unreliable person, as a number of printers continued to make their own ink for the next one hundred years, and the firm with which I am associated were actually printers to George III. before they became makers of printing ink under his patronage. The quality of the ink they made brought them orders from other printers, and before the end of the eighteenth century the demand for this product so far exceeded their output of print that they gave up the latter and confined their attention to the trade that is described by he historian as being so "ungrateful to the senses."

WAR-TIME EXPEDIENTS.

So far I have only referred to black inks, as in the early printed books in which colour appeared in the initial letters it was usual to add this by hand. Improvements in the manipulation of inks of all kinds were continuous until the Great War, when the trade had a severe shock. Inferior substitutes for linseed oil and low-quality colours had to be employed in some cases, and these, coupled with the dilution of skilled labour, caused a setback without parallel in our generation. Matters might, however, have been very much worse, as on one occasion in 1918, when I was appealing before the tribunal for one of our few remaining skilled men, I ventured to tell the magistrate that ours was a "key" industry, and that the War Office could not issue its instructions by the million without our aid. I was promptly rebuked by the retort that as long as he (the magistrate) had any oil in his garage and soot in his chimneys the country should not suffer for want of printing ink!

THE STORY OF PROGRESS.

Coming now to the manufacture of a modern ink, I think one may say that the progress that has been made has very closely followed the development of printing machinery and the greater variety of methods of printing that are to-day employed. Machinery for making inks has developed to no less an extent than the machines on which ink is used. For many years and even centuries printing inks were ground by hand with a stone muller on a stone table. After lithography was invented, old lithographic stones often formed the table, and a pear-shaped piece of granite worn flat at one end and as large as a man could grasp in his hand became the muller. When triple roller mills came into use the rolls were about half the width and half the diameter of those now employed. A man could then easily hold a roll in his hand, whereas to-day the three rolls in each mill weigh over a ton.

THE GRINDING MILLS.

A number of ink makers drive their mills by electricity, but the practice is by no means universal, as considerable gearing down is needed to

enable the mills to run at the moderate speed required for good grinding. Too great a speed leads to overheating of the colours and tends to the deterioration of the ink and impurity in tone. In the case of bronze blue, which causes the rolls to become so hot that they cannot be touched by the hand, it is possible for the ink to give rise to spontaneous combustion after it has been withdrawn from the machine. For this and other reasons water-cooled mills are now in use for grinding certain colours. The two back rollers of each mill are the grinding pair, and turn inwards. There are cheeks at the outer ends, so that a trough is formed, into which the colour and varnish are placed after they have been weighed out and blended in a mechanical mixer. The two rolls and cheeks are so finely adjusted that it is possible to pour in a gallon of water and have no sign of a leak. In addition to the rotary motion of these two rolls, the middle one has a lateral movement which adds to the efficiency of the grinding. The front roll of the three rotates towards the operator and is the delivery roll, against which a sloping steel tray is closely fitted to receive and deliver the ink into the stock pan. The number of grinds given to an ink varies considerably, and not necessarily in proportion to the quality of the colour, but rather on account of the nature of the many different pigments that are in use.

LITHO POSTER INK.

I once heard a printer say that blue litho poster ink ought to be cheap because it is only laundry blue ground in boiled oil. In point of fact it is made with an ultramarine that is considerably better than laundry blue, and, as it is one of the harder colours to grind and requires putting through the mill many times to obtain a smooth ink of good body, it should not be regarded as a cheap ink. When the milling of an ink is finished it is either fed into a stock pan to be " potted off " when cold or run into the tins in which it is sent to the printer. In the latter case the lids are better not put on the tins until the contents have cooled. The former method is the better, although more trouble, because it is not always possible to check the body of an ink as accurately when warm as when it is cold. Probably the greatest event in the memory of any living ink makers was the introduction of aniline dyes in the latter part of Queen Victoria's reign. But for this discovery it is possible that colour printing from fine-screen blocks would not have succeeded, or at all events it would not have been a serious competitor of lithography.

VARIOUS CLASSES OF INKS.

The various inks that are in use to-day are all named after the particular work or purpose for which they are devised, and I will now give a brief idea of how each is made. Broadly speaking there are three methods of printing: Relief printing, or impressions from raised surfaces; surface printing from a given level; and intaglio printing from surfaces that have been hollowed out. The first method provides the greatest variety of processes. Chief among these is letterpress printing, and in this one category there are many classes of ink. Newspaper qualities are the largest in bulk, but book printing is older, and should come first. A good black book ink is to-day made from a carbon black which comes from America, and is obtained by burning a natural gas, and collecting the powder which is deposited in the smoke chambers. When purified this is afterwards ground into the linseed oil varnish, which the larger ink manufacturers make for themselves. A good deal of care is required in making this varnish. It is generally prepared in copper or aluminium pots of half a ton capacity, and taken gradually to a temperature of about 600 deg. F. This operation usually takes the whole of a working day of eight hours, and it is complete when the oil has become free from grease and assumed the necessary thickness for making a printing ink. This thickness or viscosity, as it is called, varies with different inks and according to the season of the year, although linseed is less sensitive to changes of temperature than some other oils. There are small quantities of other ingredients in a book ink besides those stated, but these vary according to the class of paper employed. It is hardly necessary to mention that the heavy glazed papers in use twenty years ago needed a different ink from the absorbent featherweight stock used so extensively to-day.

NEWSPAPER INK.

Newspaper inks when first made for the early news sheets that preceded the daily newspaper were in common with other inks made with linseed oil varnish. Modern requirements in the shape of fast rotary presses and vast editions have altered this, and now a news ink varnish is made by dissolving resin in a mineral oil of good body. This has the merit of being less expensive as well as more suitable for the work. The carbon black used is naturally of a cheaper grade than that employed for the better quality inks, and I am glad to say that some of it is made in this country. Not being a very dense black, it is necessary to blend with it a small proportion of oil soluble blue dye, which is also a British product. Before this came into general use it was customary to either use no blue at all or add prussian blue to the black, but it was found that this did not produce such a clean working ink for printing the numerous halftone illustrations which are now a prominent feature of most newspapers.

COLOURED LETTERPRESS INK.

Coloured letterpress inks next claim our attention. The present generation have become so accustomed to inks made from lake pigments of aniline origin that it is difficult to imagine how our predecessors got on without them. Fortunately, they arrived about the same time that photography gave us the process block. The need for impalpably fine colours did not make itself felt while letterpress printers were working from type and line blocks. For these, mineral and earth colours such as vermilion, ultramarine, indian red, prussian blue, chrome yellow, chrome green, umber and sienna, etc., were quite efficient. If tried to-day on screen blocks of 150 or 175 lines to the inch their shortcomings would soon be apparent even on a " run " of moderate length. But apart from their want of " fineness," there are some, such as ultramarine, which have a chemical action on copper plates, and are therefore barred for process printing. Although ultramarine is barred, there is another blue, synthetic cobalt, which, although similar in colour, is totally different in character.

ANILINE DYES.

The earlier aniline dyes were very fugitive, and this disadvantage delayed their general adoption,

and caused colour makers to precipitate their dyes on coloured mineral pigments so that when the dye faded there was always a substratum of the dull, but fast, colour visible. As new dyes arrived which were faster to light, the coloured bases were discarded, and now all the best colours are made by striking the aniline dye on a white base of hydrate of alumina. Printing inks made with alumina lakes, as they are called, are transparent colours, by which you will understand that when two or more colours are superimposed the influence of the one underneath will show through the colour printed above it. In some cases it is not desirable that inks should be transparent or even semi-transparent, and cover inks will come to your minds as an example. As most covers are of a dark tone, it is necessary that the inks should be as opaque as possible, so that the type may stand out clearly with a minimum of printings. If a particular shade is required that cannot be supplied in an opaque quality, it is sometimes advisable to print a flake white as a foundation to "hold up," as it were, the subsequent semi-transparent ink. Bookbinders' cloth inks are another example of the necessity for opaque pigments to avoid double printing. They differ, however, from cover inks in that they are not made with the usual linseed oil varnish, but contain a percentage of gum and some powerful gloss driers.

CHEQUE PRINTING INKS.

Among other letterpress inks which are not ground in the orthodox vehicle I must mention copyable and cheque-printing inks. These are similar, though not identical. To fulfil their purpose copyable inks must be absolutely free from oil, and even the rollers, though new, should be washed to rid them from the smallest trace of grease. Both inks are made with glycerine of standard 1260 specific gravity, but as this has the property of absorbing moisture from the air, it will very soon deteriorate to a gravity of 1250 or 1240. This drawback, which would spoil the working body of the ink, has to be counteracted by the introduction of a syrup which has the opposite tendency. Similar dyes are used in both inks, but while copyable colours are required to be strong and to make several clear copies, the first consideration with cheque inks is that the dyes chosen shall be as sensitive as possible to the wiles of the would-be forger.

LETTERPRESS POSTER INKS.

Letterpress poster inks come next on my list. These bulk somewhat largely in the sum total of coloured inks, but substantially they vary but little from the cheaper jobbing inks. Obviously they should not be affected by rain or sunshine during a given period. Unfortunately, this group of inks is the subject of severe competition, and this accounts for some of our bills looking very sadly after a week of summer weather. Red is the colour most affected, as the cheapest of blues, yellows and greens will withstand considerable exposure. There are plenty of para and lithol reds at a reasonable figure, which are fast to light, but those buyers who require their reds at the same price as the cheapest poster yellow must take the risk of their fading at an early date. Some printers who attract business by the durability of their work actually print their posters in genuine madder, which will, of course, retain its colour as long as the poster hangs together.

PROCESS INKS.

Process inks are another important group which come under the first heading. Halftone black is made in many qualities, and on the best work only a very thin layer of ink is transferred to the paper. It is, therefore, necessary not only that the finest carbons should be used, but that these should be blended with the best bronze blue and purple lake to give the maximum density to illustrations produced in this way. Considerable skill is required in making this type of ink, as there must be sufficient tackiness to permit the ink to "lift clean" from the block at each impression, but not enough to "pluck" the face of the art paper on which such inks are most frequently printed. The drying properties of halftone inks also require careful adjustment, as those printers who do not "wash up" their machines at night do not expect the ink to dry on the table and rollers, although they require it to adhere to their paper without "set-off."

COLOUR.

In my opinion, more experience is required to successfully make a full range of black inks than to produce a similar number of the coloured variety. Three-colour inks are, to many, the most interesting of all the colours, and every year finds a larger number of craftsmen working with them. The shades of yellow, red and blue indicated by the spectrum and recommended by the photographic filter makers, cannot be exactly matched in pigment form, and those which are nearly correct are not as permanent as could be wished. The operation of this method of printing, therefore, rests on a compromise so far as the inks are concerned. For book printing and other work which is not exposed to sunlight, the fugitive set is extensively used, as it gives brilliant effects as well as good blacks in the shadows. For prints that will be subjected to a good deal of sun the best madder is used in the red, and a fine milori blue for the third working. The yellow does not present any difficulty. The compromise series, as one might term it, is the most largely used, as it is fairly brilliant and has good fastness to light for a considerable period. The red in this case is a blend of the blue shade eosine and fast geranium, while the blue is of the Chinese variety with the addition of a little aniline turquoise. Even though the yellow does not present difficulties as to fastness, opinions as to the nature of this colour are not unanimous. In this country most printers work the yellow first as a semi-opaque ink, while on the Continent some firms buy a transparent yellow and print it last. Although a majority of craftsmen think our order of printing the best, one of the disadvantages attributed to it is that, being a very pale colour, it is not always possible to gauge the quantity of yellow to be carried to exactly match the completed picture. The red, being a deeper hue, is more easily judged, and if the yellow is printed last, the first impressions of the third working will clearly show the correct quantity to be run.

TRICHROMATICS.

The drying properties of trichromatic inks are an important feature, but printers are by no means agreed on a standard. It is generally admitted that each colour should be almost but not quite dry when the next is imposed. Some firms who have a quantity of regular work run three machines on

one job. As soon as a couple of reams of yellow are finished on No. 1 machine, the pile is transferred to No. 2 for the red working, and an hour later these sheets are fed into the third machine which is printing the blue. In this way a supply of finished work is available at mid-day. This system necessitates using quicker drying inks than are usually asked for. The result, however, may be excellent,and certainly better than those obtained from tandem or simultaneous printing where the colours are practically wet when superimposed. Most three-colour printers prefer their trichromatic inks to be slow in drying, so that if it should be necessary to postpone the imposition of the second and third colours for a day or two there is no difficulty about getting the ink to pick up after the interval. In the event of a rush job coming along driers can be added, but they cannot be taken away or counteracted without spoiling the ink.

TWO-COLOUR INKS INCREASING.

Two-colour letterpress inks are not extensively used, but there are signs that the demand will increase. The guiding principle in choosing a pair of colours is to see that as far as possible the shades of the three primaries are shared by the two substitute colours. A combination of yellow and blue with some red added to each gives orange and purple, which, with the addition of a touch of black to the darker colour, are probably as good a pair of inks as it is possible to arrange for most subjects.

Double-tone inks are the last group of letterpress inks I propose to refer to. If ever there was an ink that an inkmaker wished had never been invented, it is the double-tone process ink. I think it is generally known that it is made with a stable halftone ink of good quality plus a small quantity of fugitive oil soluble dye. Such an ink has been likened to the English weather—it is uncertain in its behaviour. The effect of introducing this dye is to create a thin circle or halo of a light colour round each dark halftone dot, and thereby give every print the appearance of a double printing. The cause of most of the trouble arising from its use is due to the fact that different papers develop the halo in varying degrees, and a printer executing repeat orders on fresh deliveries of paper can never be sure that he is going to obtain the same effect that he had before. Then again, the appearance of a print may vary from time to time. The maximum effect is not developed until a day or two after it has been printed, but it has a tendency to decline or become more subdued as time goes on. Other mishaps arise through the occasional use of too thin a paper or the introduction of too much dye, causing the ink to show through or set off on the next sheet. A coated postcard of good quality will stand a larger proportion of double-tone dye than an imitation art or super-calendered paper, and disappointments often occur through a printer buying his ink for one purpose and using some of it for another. The remedy, therefore, when buying double-tone inks is to attach to the order a piece of the paper on which it is proposed to print.

LITHO INKS.

My second heading refers to inks required for printing from a level surface. This, of course, includes lithography in all its branches. Lithographic inks are not vastly different from those supplied for letterpress printing. They are stouter in body, having a larger proportion of pigment ground into a stiffer varnish; they are consequently harder to grind, and incidentally cost more money. There are certain pigments such as earth colours which cannot be used for halftone printing, but which are extensively employed on stone. On the other hand, there are several colours which are good for letterpress printing such as the eosine family, which are not recommended for lithographic work, as they are inclined to run in water. Most lithographers require their ink to be very stiff; stiffer, in fact, than the operator can use them, as it is a long-standing custom with many men to reduce their ink themselves. I do not know why this should be so, as in Canada, where a number of old English craftsmen are still at work, it is usual for litho inks to be supplied ready for use; and if an ink is sent out with too stiff a body, it is likely to be returned to be re-conditioned.

In offset lithography two additional facts have to be remembered. One is that, as the rubber blanket picks up and transfers very little ink to the paper, that ink must be as concentrated as possible to avoid a washy appearance in the print. Secondly, it must not contain any ingredient which will adversely affect the surface of the rubber. In printing on tin the above facts have also to be remembered, and in addition the colours must stand a stoving temperature of 140 deg. to 160 deg. F. for several hours, without discolouration or any tendency to crack when the tins are bent into shape.

INK FOR COLLOTYPE.

The only other form of surface printing I want to mention is the collotype process. This, as you may have heard in this hall a few weeks ago, is a method of printing from a smooth gelatinised surface which produces very beautiful results. The inks used are a modified form of lithographic ink, and, while the quality must be good, it is of even more importance that the room in which the work is done should be of a warm, dry, even temperature both night and day.

INK FOR INTAGLIO.

The third and last heading deals with inks for use on intaglio or hollowed-out surfaces. The simplest example of this kind of printing is the ordinary visiting card, and one of the most important the government ordnance maps and charts. Both are printed from engraved plates, and the black ink made for this work is known as a "short" ink as compared with the tacky variety needed for printing from halftones. Copperplate black looks black when it is printed, because of the depth of ink picked up from the cervices in the plate and deposited on the paper, but in reality it is one of the least dense of all inks, being largely made from Frankfort black, which is, or perhaps I should say used to be, made from burnt vine stalks. It is only necessary to place a piece of Frankfort carbon by the side of a sample of the best gas black to see that the former is really greyish in comparison. The two important points to remember in making a copperplate ink are that it shall lift properly from the engraved portions when pressed against the paper and wipe perfectly clean from the burnished surface of the plate.

Intaglio printing from engraved copper cylinders requires an entirely different type of ink. The "doctor," or steel "wipe," which cleans the printing cylinder at each revolution, requires the ink to be as soft as possible to obviate scratching or wearing the plate. Owing to the speed of the machine the ink must dry much more quickly than

is necessary with ordinary flat-bed inks. This result is achieved by making the ink with rectified white spirit, which causes it to vaporise on the unengraved portions of the cylinder before it comes in contact with the paper. In some machines there is a row of compressed air jets operating against the copper to make sure that there shall be no stain or smear on the margins of the sheets.

The last type of ink to which I want to refer is one of the latest known to the trade, namely, the water photogravure ink. As the name implies, this ink is prepared without oil or spirit, and in consequence it has the great advantage of being non-inflammable. It is made with water-soluble pigments in the form of a paste which can be reduced with water if necessary, and it will dry on both paper and plate almost as quickly as a volatile spirit.

INK DIFFICULTIES.

Having now referred in outline to the making of most of the principal printing inks, I want to mention some of the difficulties to which printers have drawn attention. " How to buy and use inks " as a general headline embraces some of the points I have in mind. Let me say in the first place it is seldom policy to buy cheap inks. A printer usually gets what he pays for, and in such circumstances he should be satisfied. There are occasions when inexpensive inks can be recommended, and as a general rule it might be said that for large type and absorbent paper a cheap ink is suitable, whereas for non-absorbent papers, fine blocks and small type a good ink is called for. An expensive bronze carmine ink would be quite wasted on a book paper, but a " pillar box " shade of red at half the price would look well. On the other hand, a low-priced red that appeared a strong colour on an antique stock might resemble a pink when a thin film of ink had to be carried. This question of light inking is closely connected with the problem of drying which is one of the principal difficulties that an inkmaker is called upon to solve. There seems to be a growing demand among printers for inks that will dry quickly on paper and yet refrain from drying on the machine and rollers if left " standing " overnight. In some cases this request is unreasonable, as a printing ink can only dry in two ways, that is, by oxidation or evaporation, and by absorption.

LINSEED OIL VIRTUES.

One of the reasons why linseed oil has always been used is because it is the best natural drying oil available. Modern requirements, however, make it necessary that we should get in advance of nature, and so powerful driers such as cobalt linoleate are added to speed up production. A printer, for example, who has been using an ordinary ink on absorbent papers finds that, while the ink dries satisfactorily thereon, he can abstain from " washing up " at night, as it will be possible to run on in the morning without any trouble. He then has a job to execute on a hard paper; it may be highly calendered, or a coated art, but, although the surface is hard to penetrate, he expects, or shall we say hopes, that it will still be possible for his ink to dry quickly on this unyielding surface, and at the same time remain moist on his machine all night long. This difficulty is minimised to some extent by the use of a penetrative drier, which forces the paper to hold the ink. Such driers must, of course, be used with discretion, as a spirit which penetrates will also disintegrate, and if the linseed oil varnish in which the pigment is ground loses its grip on the colour, it is possible for the medium to go into the paper, and for the pigment to remain on the surface and powder off. An alternative is the light inking I have referred to. By using a concentrated ink it is possible to carry a very thin layer which, while drying more quickly than a normal impression, will not be inferior in colour value to a full inking from a colour at a lower price. Obviously the expense of using the dearer ink is not very much greater, as more paper is covered by the same weight of material.

BEST INKS ONLY GOOD ENOUGH.

This brings us back to the earlier question, that it is usually wise to use good inks, even though they appear expensive. Coming from an inkmaker this may seem like special pleading; but when I tell you that the percentage of profit on the costly product is no greater than on the other, you will understand that an inkmaker's only object in recommending the better article is that his customers shall be confronted with fewer trials.

Another source of trouble arises from the misuse of printing inks. There are a number of English printers who do a varied class of work and yet have a very limited knowledge of the materials they use, so that it becomes necessary to say that, failing some acquaintance with the composition of inks, they should only be used for the class of work for which they were originally purchased. One of the most common mishaps is due to fading. A printer, let us say, works a circular in an emerald green. His customer is pleased with it, and orders a showcard in the same colour. It fades, of course, and recriminations ensue. The printer should know, and I am glad to say the majority do know, that emerald is not made in a fast pigment. The same remark applies to the brighter violets, brilliant blue lake, blue shade geranium, and magenta.

CAUSES OF DISAPPOINTMENT.

Some people have the idea that, because a bright colour is reasonably fast as a dress material, it will be equally so as a printing ink. This unfortunately is not the case. Yet another cause of disappointment arises from mixing colours together too freely. This again is often traceable to the buyer of print. He likes a cover, perhaps, that is printed in a certain brown, and thinks this would look well on a job in which there are some halftone portraits. In the matter of shade he is possibly right, but when the printer, to use up some ink he has in stock, decides to blend his heavy cover brown with some process ink, he is taking a risk which is likely to lead to trouble in working.

It is possible that at the conclusion of my remarks someone may say: You have not given us a single formula for making printing ink. This is so, and for two reasons. In the first place, probably very few of you will want to become printing ink makers, and, secondly, an ounce of practice is worth a pound of theory. There can be few trades in which a longer practical experience is necessary to produce a good all-round craftsman. It is possible to give two men the same formula and the same materials, and to find that the ink made by one will print well and that made by the other will work badly. An alteration in the order in which the ingredients are put together is sufficient to spoil some inks, and as for variations in atmosphere and temperature, that is a study by itself.

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STANDARDISATION.

It has been suggested on more than one occasion that printing inks should be standardised. Desirable as this result may be, I look upon it as a practical impossibility. When it is remembered that for much of the big work printed in this country separate inks are made for each job, and that printers like to know that they are having special inks prepared for them, it is easy to see that standardisation is a far-away goal. I do not think it would be an exaggeration to say that if you could look into the cupboards of a thousand different printing offices in England to-day you would not find the same selection of inks in any two of them.

The making of printing ink is an occupation full of interest and variety, but the maker incurs many responsibilities. If, therefore, his contribution towards the printed word does not always come up to your expectations, let your criticism be helpful, so that he may the better serve you on the next occasion.

QUESTIONS.

Mr. Cox then replied to many questions, some of which were as follows:—

Are present-day colours as permanent as the colours obtainable in pre-war days?

He was very glad to say there had been a vast improvement in the British colours now used in the past three years. Two or three years ago he would have said the pre-war colours were so much better they would have been glad to get them back. But the British colours now used were in many cases quite as good and in other cases very nearly as good as they used to have. The pigment colour makers were to be congratulated on their progress made in the last three years.

Why does bronze blue print better on some papers than on others?

Simply because for one bronze blue there is only one paper, and the best way was to send up a piece of the paper to be used.

Is there any apparatus for testing the permanence of ink in the winter time?

Yes, there was an apparatus which was very useful for the purpose. Of course, in the summer, if they had plenty of sun, they did not need any apparatus of that kind very much. They used an arc lamp with a number of little windows around it, wherein they put the colour, and tested it for the influence of light. They could also test it for the influence of heat. There was a certain amount of heat given off by the lamp, and they could approximate it to the heat of the sun. The method of testing showed that the influence of the arc lamp for about an hour equalled a summer's day of about twelve hours. This showed how colours would behave when exposed to the sun later in the year.

Why are we in England not able to have standardisation of inks, as they do on the Continent and in America?

Mr. Cox thought the questioner had misunderstood his reference to the subject. The English manufacturers were perfectly able to standardise any inks they liked, and his firm were selling more than one ink to-day they were able to offer twenty years ago. People who wanted standard inks and quoted the registered numbers could get the same ink year after year. The point was, a very great number of printers took orders for special jobs; the artist got out the scheme of colours, which did not fit in with the colours the ink maker had in hand, so they had to be specially made. It was only for jobbing printing where they could use the regular stock inks.

Is the manufacture of ink at all different to-day, because printers used at one time the old washing trough, and it used to be said, in answer to the question, "Why is paper damped?" "To prevent the oil in the ink from spreading." How is it we do not damp paper to-day and oil does not spread?

Inks were not materially different to-day. Their difference was mainly due to the greater spread of printing machines in use. Substantially it was the same to-day as 20, 30, or 40 years ago.

Are driers needed to be added in operating printing inks?

That entirely depended on the paper used. If the ink is known to dry satisfactorily on certain papers, one does not need to add driers, but if non-absorbent papers are to be used, if the printer has not unlimited time to give to the drying, he must add driers.

Why is it that some litho inks will wash and leave stains on the paper, and what is the remedy?

This question was not quite easy to answer. He could not give all the reasons. Lithographic inks were often required to be very strong in colour, and sometimes, in order to give what was required, more colour was put into the ink than was desirable, the result being that they were inclined to stain, as the whole of the colour was not gripped by the varnish. Then again, the pigment maker might be at fault in attempting to put in more than the varnish could absorb, and if the colour was not fixed it was liable to run in the water when used for lithographic purposes.

Are solvents necessary?

Occasionally solvents were necessary, particularly at this time of year if the printing office was cold. The first thing in the morning they might find the ink required a solvent. One advantage of the spirit solvent was that the body of the ink was temporarily reduced to a good working consistency without impairing the quality. It evaporates so soon that the body is not spoilt.

Can inks be blended by the printer?

Of course they could. He knew of printers who had the three primary colour inks and did not use three-colour printing at all. They managed with half a dozen, and did practically all their work by blending those colours. Of course, it needed an appreciable knowledge of colour to always blend them successfully. Certain colours, like vermilion, a mercurial colour, if blended with a lead colour, would cause discolouration. It was not desirable for anyone to start blending their printing inks unless they had a fair knowledge of their origin.

It used to be said that Colman made his fortune out of the mustard people left on their plates. The ink maker makes his fortune out of the ink that gets wasted?

Mr. Cox said he would be sorry if that was the case. His experience was that most printers took care of their inks. If a man only used half a tin of ink, and covered it up with a little oil, he should not waste what is left in the tin. If a printer was in a small way of business, and knew he was not going to use a whole tin of ink, he should have his ink in tubes and use them at leisure without waste.

Is there any prospect of fugitive inks ever being made permanent?

For most practical purposes, fugitive inks were nearly permanent now. Practically every shade likely to be required was available with the exception of about half a dozen. These could be exposed to light for the period required for common work.

A very hearty vote of thanks was accorded to the lecturer, on the motion of Mr. E. Unwin, sen., and Mr. J. R. Riddell.

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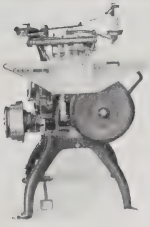

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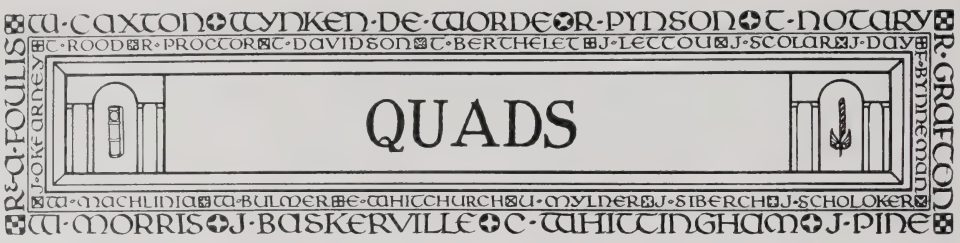

APPARENTLY, more than a thousand employes in the London printing world are housed by the London County Council. Sir Thomas Bird, the Clerk to the Council, in a pamphlet issued last June, names 600 printers as Council-housed, but it is probable that a good many other workers are included among the "550 motor drivers," the "350 engineers," the "300 fitters," and the "2,000 clerks," and a smaller number of commercial travellers and salesmen also housed by the L.C.C.

IT is good to remember, too, what a large part Sir Sydney Waterlow had as a pioneer in providing well-conditioned dwellings for wage earners in the Metropolis.

ON every ground, the housing of printing employes is certainly a matter which should be kept well before the notice of the craft. It is indeed solicitously borne in mind. "I am quite troubled," an employer said to me, "at the thought of the home discomfort of several of my workers."

NEARLY a million people in London at this moment are living in over-crowded conditions. The after-war London County Council, in a mood of intense zeal and public spirit, determined in 1920 on a swift building of 29,000 houses. But it "got cold feet," and it reduced that number, which itself would have been quite inadequate to the appalling need, from 29,000 to 8,720.

WANTED—a wave of real housing reform enuthsiasm in our craft.

A SCOTCH daily is credited with having made a guarded promise of a thousand pounds for the saving of a minute in the present recognised minimum time after the last forme is received before the first copy is printed.

AT 8.20 p.m. the other evening The Daily Chronicle wanted six formes from the comps. Yet it caught the Marylebone (Central terminus) 9.10 train with 1,000 quires.

THERE is an indefiniteness in the story as it comes to me as to who is to get the thousand.

THE New York Sun has been using a Radio Loud Speaker to save seconds in its "World's Series" box scores. I read: "The compositor Pat Scanlon, and old-time baseball player, translated play-by-play account into figures under familiar headings. . . . On the first of the 9th (innings presumably) the nearly completed box was placed in its page forme on a steam table in the composing room, where from another loud speaker the few remaining plays were recorded. A near-by linotype simultaneously set the last of the play-by-play account. Within ten seconds after the last put out in the 9th, the mat (matrix) was on the page. In less than five minutes the presses were running with a complete box score. What was saved was the time formerly lost in handling telegraphic copy."

MR. HOOVER, who made so great a reputation in Europe as International Food Organiser in War-time and Famine-time, is now the Secretary who in Coolidge's Government has to deal with Radio. He has been saying, very sensibly: "I believe that the quickest way to kill broadcasting would be to use it for direct advertising. The reader of the newspaper has an option whether he will read an 'ad.' or not, but if a speech by the President is to be used as meat in a sandwich of two patent medicine advertisements, there will be no radio left."

ANOTHER obiter dictum of his, equally wise, runs: "It would be unfortunate indeed if such an important function as the distribution of information should ever fall into the hands of the Government."

WHAT led to this pronouncement is the difficulty that occurs between those who propose to set up super-stations with power rising as high as 50 kilowatts, and the maintainers of smaller broadcasting stations. The smaller men protest that they see monopoly on its way, and they undertake to do all sorts of things in the way of inter-connection, so that matters of great national interest may be quickly sent from coast to coast. Mr. Hoover seems sympathetic with this. At any rate, he says that development can only be accomplished by organised co-operation of the industry. He certainly wants local stations to be able to deliver every important national event with regularity.

I MAKE mention of these things because it is manifest that newspapers—and, for that matter, printers, as printers also are in various ways distributors of news—must take account both of what broadcasting now is and what it may become. In the States publishers already maintain forty-one broadcasting stations. One hundred and ninety-six stations are owned and operated by makers or dealers in radio apparatus; 39 other broadcasting stations are maintained by department stores and similar mercantile concerns; 85 educational institutions; and 35 churches and 4 schools are among other bodies which are availing themselves of this method of reaching the public. I will not dwell further upon this matter to-day, but here is a little food for reflection.

MR. WILLIAM SESSIONS' word comes back to mind: "I date a forward movement in my printing business from the moment when I realised that the public did not want printing." Of course, he meant by what he thus dryly put to us that if the public could serve its object more directly and more economically than by using printers' ink, they would certainly give printers' ink the go-by. The

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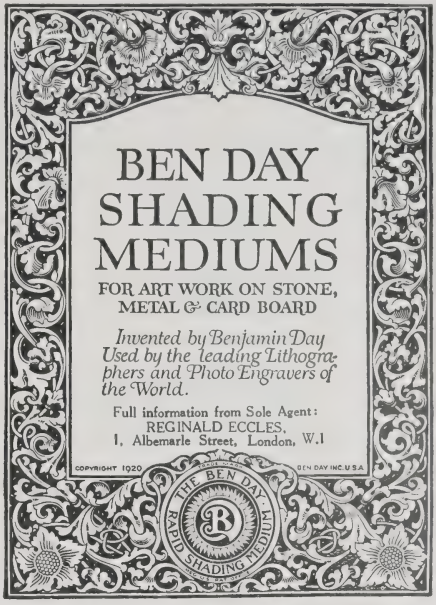
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public did not want horse 'buses as such, and, when they could " get there " quicker than by the horse 'bus, the horse 'bus went.

Of course, the printed word remains. The sound dies away, leaving only such impression as it may have made upon memory.

Just lately I've been dipping into Forster's Life of Dickens. Curious how some passages seem parallels of some things noticed or said, or supposed to be said, to-day. As, for instance, this, during the Crimean War. Dickens to Forster: " Do you know that the French soldiers call the English medal ' The Salvage Medal '—meaning that they got it for saving the English Army? "

Or this again, applied by Dickens to America in her slavery, pre-Lincoln days: " They are friendly, earnest, hospitable, kind, frank, very often accomplished, far less prejudiced than you would suppose, warm-hearted, fervent and enthusiastic. They are chivalrous in their universal politeness to women. . . . The State has a parental care and watch over all poor children. . . . The desire to oblige is universal. . . . But . . . I would not live here on any consideration. It goes against the grain with me." And in another letter to England: " We shall soon meet, please God, and be happier and merrier than ever we were in all our lives. . . . Oh, home—home—home—home—home—home—HOME!!!!!!!!! "

He wrote one notable sentence about America which to-day may seem applicable to Russia: " I do fear that the heaviest blow ever dealt at liberty will be dealt by this country in the failure of its example to the earth."

How Dickens would have delighted in the printing craft's great service to its war orphans. In Edinboro' he had toured with a good medical guide in the closes and wynds; in one poor room he found that " there lay in an old egg box a little, feeble, wan sick child. . . . With his little bright attentive eyes, I can see him now, as I have seen him for several years, looking steadily at us. He lay there, the mother said, ' seeming to wonder what it was a' aboot.' God knows, I thought, he had his reasons for wondering." Dickens was speaking for the Great Ormond Street Hospital for Sick Children, Mr. Punch's favourite hospital.

Of course, things are greatly improved in comparison with this period. But——

A word from Lord Fisher to any who may be setting too much store upon the value of standardising everything: " There is no progress in uniformity."

Just a story in passing. Cervantes, the author of Don Quixote, tells how an Archbishop of Seville, a very famous preacher, enjoined on his faithful secretary to give him warning as soon as he saw signs that the Archbishop's faculties were failing. The secretary gave the warning. The Archbishop sacked him.

Sir Joshua Reynolds used to chortle delightedly at the story how Dr. Johnson in his final illness urged a friend faithfully to tell him what that friend thought he had noticed as Johnson's gravest faults; how the friend instanced as a fault an overbearing, almost bullying, demeanour, and how overbearingly and bullyingly the old invalid turned on him and trounced him for his stupid mis-judgment.

" The New Teaching," edited by John Adams (Hodder & Stoughton), is now six years old, but well worth the study of all who see defects in present educational methods. As that very great surgeon, Sir Frederick Treves, used to impress, a very great part of education is teaching a lad to develop powers of observation.

The Master Printers' Federation has set a fine lead with its co-operative advertising. It's up to the branches now. Happily, the spring is coming; and as spring comes near, branches " twig."

Journalists, technical or other, may " weel hae a guid conceit o' theirsels." I have just heard Lord Birkenhead say at the Press Club that in thirty years he had never once known a journalist who had interviewed him or had had any communication with him, come within miles of the slightest abuse of confidence." Words of a tired man, hasty unguarded words it might be, spoken to a journalist, in by-the-way freedom, and not for publication, had never once been published. So, too, Winston Churchill testified on the same occasion that in all his ups and downs his journalistic friends, all and sundry, had shown him personal kindness and consideration. And the Prime Minister, also speaking at the same Press Club lunch, said he had found among journalists some of the whitest men he had ever known. He did certainly add that just one or two men in journalism, as here or there one or two in any calling, showed a twist.

And, speaking of crooks in general, he recalled an American yarn about the typical twister. He was a man who, if he swallowed a tenpenny nail, would surprise the operating surgeons, for they would find it had become a corkscrew in his interior.

Mr. Johnson, of the Federation—Johnson the Panoptical—has cast one of his many eyes upon Indian currency printing, and has kindly sent me a pamphlet bearing upon it, which I am interestedly studying. Almost the same day he rallies me upon the new Bassani process.

These terrible men of the Old Bailey headquarters, who won't let us quote too low prices, will neither let us do work of too low quality. " Every daubster a dabster " is their motto.

Mr. Riddell, head of the 1,500 army of printing students at the London Printing School, has lately visited the Continent, and has reported to his Committee on this new Bassani process.

Mr. Gamble touched on it at Stationers' Hall recently. I think there is in this process a mechanical device in the camera to move the screen in a circular path, just as if the screen itself made that movement. It has the effect, Mr. Gamble explained to us, of widening out the dots and so closing them up in the high-lights. Mr. Gamble suspects that this spreading must equally affect the middle-tones and shadow-tones. But the inventor says this does not happen. It should be carefully studied.

Mr. Riddell speaks of the Bassani method yielding " negatives suitable for photo-litho by one operation "—instead of three. It may be demonstrated at the London School of Printing.

Surely we have not yet done all that can be done to effect a perfect union of screen halftone photography and offset litho.

Before I forget, let me thank Mr. Riddell for his most informative, companionable, easy-styled report on the printing schools and works he has just visited in various countries.

Mr. Gamble declares that Mr. Bawtree's new colour process is commended by "convincing" arguments. It is well worth our careful study. Mr. Bawtree is one of the brainiest men in the graphic arts; and he is always working, always cogitating. All honour to him; and all success. He "travels hopefully." May he arrive with a really fine home-coming. He deserves the best that can befall him.

The posters and affiche class of graphic printing, which Mr. Gamble had collected at Stationers' Hall for an exhibition as a preliminary to his talk, indicated that Great Britain is doing the finest posters in the world.

Did all those who looked at the book Mr. Gamble held up to view at Stationers' Hall realise that it illustrated a new achievement, *i.e.*, by offset litho, on a machine auto-fed with quad-demy sheets at 3,500 per hour? There is no impression cylinder in the ordinary sense of that term. The great sheets are nipped between two finely-adjusted blanket-coated cylinders, duly adjusted to serve the two functions of image transference and of pressure. The feeding can come from a pile or from a reel. If from a reel, then a knife cuts off a quad-demy section before the sheet gets its nip between the blanketed cylinders.

Look out, too, for a three-colour offset machine. Not the yellow, red and blue of three-colour letterpress halftone. A large cylinder revolves, and as it comes round, the same moment see a sheet delivered bearing three colours; another sheet is gripped for printing. The sheet gripped comes under a stationary blanketed cylinder, with which, of course, a plate cylinder maintains contact. One colour taken. Good. Pass on. The colour is just suitably tacky. It makes practicable the application of a second and a third colour as the large cylinder revolves.

Think of a crown piece lying on your pad; and of a 3d. bit outside it and touching its circumference at one point, with another 3d. piece touching the first "threepenny" at its edge furthest from the crown piece. Think of another like set of two 3d. bits one third of the way round the crown; and another two-thirds round. There you have the sketch fairly well.

But—improvements never cease. The first of the three colour impressions may not be offset at all. It may be gravure. A gravure foundation for the two following offset prints to give gravure's distinctive strength and tone.

I believe, too, some very large printers have installed the new two-colour perfector offset, capable of printing quad-demy sheets at 3,500 per hour. Two plate cylinders impinge on the same rubber-blanketed cylinder, all three being of one size. Two colours are super-posed on the one blanketed surface, and are given off to the paper.

Mr. Riddell's report mentions an offset rotary Webb machine he saw running at Dresden; and a "Web offset" at Leipzig.

In Germany printing machines stop for only half an hour for lunch. The workers leave off early in the afternoon. Many firms work two and even three shifts.

Frank Colebrook.

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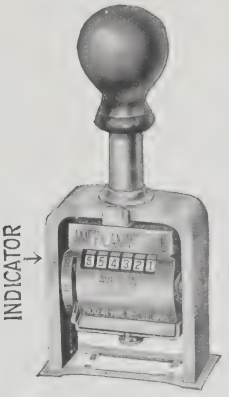

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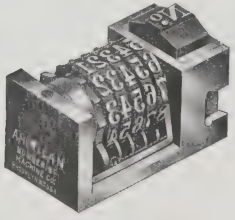

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A Short History of Offset Printing

By A. B. EVANS (Messrs. R. W. Crabtree and Sons, Ltd.)

[This article is taken by the courtesy of Messrs. R. W. Crabtree & Sons, Ltd., Leeds, and the writer, from a pamphlet printed and circulated by this well-known firm commending their own excellent Ensign Super-Offset machines. We are sure our readers will appreciate reading such a carefully-written piece of work from the pen of such a reliable authority as Mr. A. B. Evans.]

THE direct lithographic flat-bed machine is the principal progenitor of the offset rotary of to-day. This is just a plain statement of fact, and it is the object of the writer to trace in these short notes the evolution of the offset rotary through the consecutive steps which have achieved the present state of the offset art.

The first feeder who persisted in manufacturing offset impressions on the back of the sheet, as a supplement to first-class direct litho work on the face of the sheet, was the true inventor of the offset process, but whatever honours were really due were withheld at the time, and the only practical result seems to have been that his services were dispensed with. This was, of course, the first real opportunity missed, and it is wonderful that the printers of the world had to wait for many years before one of them saw that there was a commercial value in the process suggested.

THE FIRST STEP.

The first definite step was the use of single-cylinder flat-bed litho for tin-printing as well as paper-printing. It was found that a rubber blanket, if used instead of the usual impression blanket, received a perfect impression itself from the litho stone, and if used as the printing means gave also a fine impression on the hard and uneven tin sheet. In this way the first true offset printing arose, the operations of the machine being firstly to take an impression upon the cylinder from a positive design, and secondly to feed into the gripper the tin sheet, which received an impression on its inner side as it was carried round with and bent to the cylinder. A soft tympan placed over the stone during this second operation protected the lithographic surface.

Another step, which was almost contemporaneous with the first, and which has lasted till the present day, was the production of transparencies, *i.e.,* transparent sheets printed on both sides with the same design in register, in which case the operations of the machine were identical with the above except that the offset impression on the blanket was secondary in character, and the sheet was simultaneously printed by the negative stone with an ordinary litho impression on the face of the sheet, and by the offset blanket on the back of the sheet.

THE SECOND IMPRESSION CYLINDER.

The next and most important step was the introduction of a second impression cylinder for tin printing machines. This cylinder was sometimes of full size and sometimes of half-size compared with the intermediate cylinder, which latter always carried the offset blanket. The main division between these two styles of machine was the Atlantic, the former being generally European and the latter American. Both machines, however, were true offset machines, printing from stone by the offset process. The advantage over the previous tin-printing machines was that a sheet was fed, printed and delivered at each cycle or completed revolution of a machine.

THE WORK OF MR. A. J. ROWLEY.

There are one or two names which are perhaps not so well known as they should be, and which deserve more permanent record in any historical sketch of this subject, and among these is that of Mr. A. J. Rowley, at one time manager of the Crown Cork Co., who in his tin-printing days produced work on showcards, satin and paper, all done by the offset process on tin-printing machines. The best offset character is evident in this work, and one can only regret that a process which foreshadowed such possibilities was not at that time taken up as a practical commercial proposition.

Whilst still in the time of the '80's, I ought also to refer to the combined tin and paper-printing machines made for sale to paper-printing houses who occasionally did tin-printing also. In these machines the lower cylinder only was used for direct (not offset) paper printing, and the upper or "tin" impression cylinder brought into contact when required for tin printing. Both cylinders were fitted with grippers, one set or the other being used as required.

All that was necessary in this machine to produce perfect offset prints was to use it for that purpose, by feeding paper instead of tin to the "tin" impression cylinder—but who did?

ROTARY LITHO MACHINES.

Having taken our subject thus far and pointed out the way in which the offset process had been crying out for someone to start it, I must digress for a time to another branch of machinery which also has had a large share in the present position, and which will help to explain how it was that offset printing, when it did arrive, was not an ordinary babe subject to many weaknesses, and even then to slow development, but was born with a full head of hair, a full set of teeth, and could walk and talk before it was many months old.

Letterpress work, helped by true rotary machines, and in particular by the halftone block, had cut into the market for litho products very largely, and the minds of the printers and printers' engineers were turned towards an all-rotary litho machine to speed up the output of the litho trade.

The one outstanding rotary litho machine of mark, which came into the market before 1900 to meet this competition was that sold by the Aluminium Rotary Press Co. of America, and designed almost wholly by Tom North, formerly of Hoe's and later of the Linotype Co. of this country. He was undoubtedly one of the finest printers' engineers, particularly in the commercial value of his work for the trade. I have always considered this machine the "Miehle" of the litho trade, a position it would have continued to hold but for the development of the litho process in a direction away from the machine. Every builder of lithographic machinery

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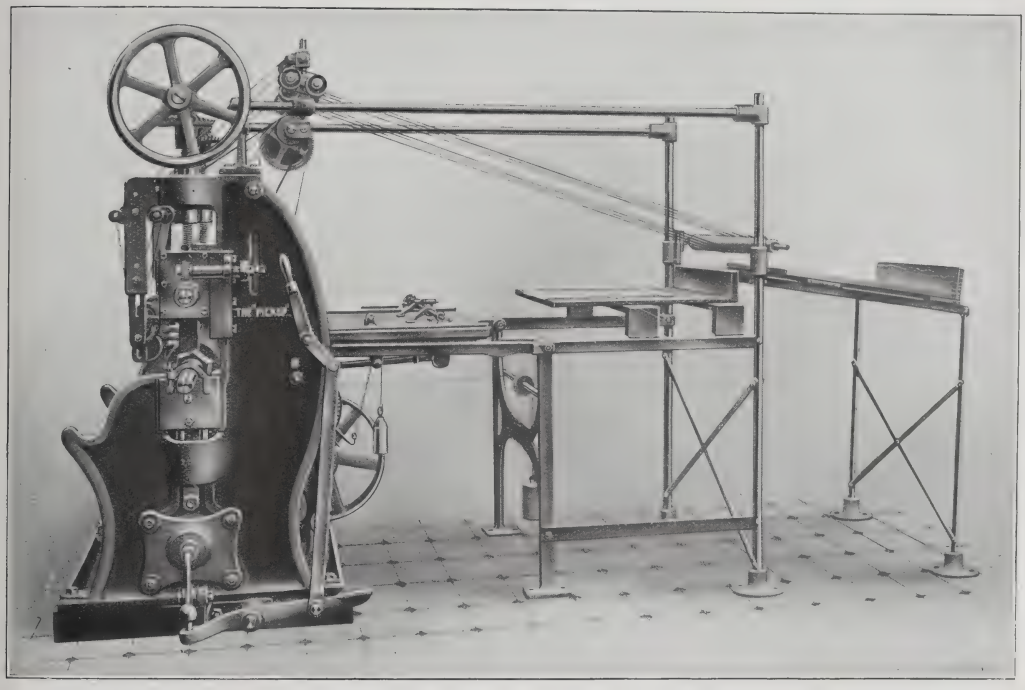

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can gain by a study of this machine, and no one who departs far from its main principles need look for further explanation of want of success.

It was this machine which popularised the use of plates instead of stones for lithography.

THE FIRST PAPER PRINTING OFFSET MACHINE.

I remember very well, too, an article by Mr. Dan T. Powell in 1901, in which he pointed out that the highest class of printing in the future would be carried out from resilient formes with perhaps steel inkers and "compo" riders and other accessories to suit. Surely a clear prophecy of offset printing.

In the meantime the speediest sheet printing machine in the letterpress world was the Harris rotary, with impression and forme cylinders only and semi-automatic feed from under a small pile replenished by hand.

In the meantime also the first really commercial paper printing offset machine had appeared in the Orloff, a Russian machine, used in, and I believe in the first place designed for, the production by the State Printing Department of rouble notes. At any rate, this machine was a multi-colour offset, gathering all the colours on to one blanket and giving thence a single impression on to the paper. It was found that this gathering up on one blanket was unsuccessful except where there was no super-imposition of the colours, as might have been anticipated from the fact that wet colour cannot lift equally wet colour on itself. The machines were, however, used for the purpose intended, and must have been partially responsible for the post-war rouble being worth only a microscopic part of its pre-war value.

THE MANN ROTARY TIN PRINTER.

The next step which may be termed important was taken by myself in conjunction with Mann & Co. in 1904, when the first commercially efficient rotary tin-printing machine was introduced, this being the first single-colour rotary offset built for sale in quantity. It was simply a three-cylinder machine with the impression cylinder adapted for a "tin" feed.

We have now reached the real start which gave the impetus to rotary offset printing on paper. In 1905 Ira Rubel, a printer's operator in U.S.A., was engaged in litho printing on bank papers and other hard papers for which the paper was then damped before printing, and for which the machine was provided with a rubber blanket on the impression cylinder. He noted the excellence of the impression obtained on the blanket and thence on to the back of the paper in the case of an accident miss-feed, and had the requisite imagination to see the value of the offset process so disclosed for all printing on hard papers by lithography. He believed the process to be patentable, and the machines to be patentable also, and though he was unfortunately wrong in this respect his services in developing a machine for the purpose, even though limited in its capacity for colour work, must be fully recognised as one of the benefactions to the litho trade and on a par with the great discoveries of the past.

RUBEL IN ENGLAND.

In 1907 Rubel came to England to sell his machines, bringing with him samples of the work done on his first machine. He did not seem to have realised the value of the process for colour work.

Mr. J. Widdop, then manager at De La Rue's, was interviewed by him in the ordinary course of business, and seeing the infinite possibilities of colour work and of widening the classes of paper printed on by this process, he asked me if something could not be done to get ready a machine suitable for the highest class colour work.

An experimental machine, namely, a rotary tin-printing machine fitted with paper feed and delivery, was accordingly made, and at once showed that such a machine would fill the bill. It was an advantage that the heavy rolling required for the solids of tin-printing was embodied in the machine.

MR. EVANS' OWN PATENT.

From this was developed in a few months the first commercial single-colour rotary offset machine for all classes of work on all classes of paper, duly patented by me in 1908. This machine was of the type with "two-revolution" impression cylinder, and for some years held the field in Europe against all comers.

In America, on the other hand, the machines were first developed for black work, particularly by the Harris Co., whose speedy letterpress rotary was soon turned into a litho offset by the addition of a third cylinder and damping. This machine was, however, at first somewhat deficient for colour work.

Whether due to the 1908 patent or not, or to the intrinsic speed of the single revolution American type of offset machine, the latter was the type developed by almost all manufacturers except Mann's, the S.W.S. Co. of Leipzig, who manufactured under my 1908 patents, the Linotype, and Hall of America.

Whether the two-revolution type of machine has superior merit may be open to question, but it is a fact that the first commercially successful multi-colour offset machine which gathered the impression on the paper, was but a variant of the patent of 1908, and was designed by me and marketed from that year almost without competition till 1914.

SCEPTICISM.

What difficulty one had in persuading a printer that the lifting of one colour on another on a two-colour machine was practicable in high-class work! It is to-day hardly accepted as an axiom when it has even been applied to the finest screen work as well as to solid on solid.

It is my opinion that the day is not far removed when nearly all litho printing on the cut sheet will be by means of two-colour offset machines for runs of 5,000 and over.

The choice of both single and two-colour offset machines is to-day a fairly wide one, and whilst machinery designed to carry out all classes of work on all classes of paper must be but a compromise, a few hints of where to look for weaknesses may not be amiss towards the close of these notes.

HINTS.

(1) If you wish to do heavy colour work with comparative ease, see that the plate surface of the plate cylinder does not cover much more than half of the circumference, otherwise you will be looking for trouble with your inks.

(2) Laying-on time should not be much less than half a cycle, otherwise the paper is handled too fast, and some weights cannot be handled at all.

(3) Do not be misled by the attractions of the process; all offset machines work by this process, and the worst machines can show an attractive result.

(4) Quality and output are not always compatible, but quality is relative. A fast machine may give the right quality at a lower speed, a slower machine can never give top output.

(5) The more automatic the machine, the less the weight on the minder's shoulders when things go right, but when they go wrong he may be overweighted.

(6) Do not take the description of printed side up for granted in regard to sheet deliveries, but examine the run of the sheet to find what contacts are made with the printed side.

(7) Insist upon a test for gear-lines, and save endless worry.

(8) See that the inking rollers permit of a free and natural roll on the plates.

(9) See whether the necessary controls are grouped in the essential positions for the minder.

Calendars for 1925

WE have received from a number of friends an interesting and most comprehensive collection of calendars. Glancing through them, we are reminded of the ideas which should have been in the minds of the makers of these calendars before they were produced. What class of customer is the calendar designed to attract? Do we wish the calendar to be hung in a warehouse, in an outside office, or in the office of the managing director? It would appear that the majority of firms who issue calendars have decided that by making their calendar a frank and sometimes blatent advertisement their publicity will be strengthened. Several of the calendars are printed a month on a sheet on a somewhat thin paper, and sent out in an envelope with the calendar folded three times. Such calendars are not likely to receive any prominence, and are likely to be taken home by an unimportant member of the staff and hung in the family kitchen. In the case of block calendars there is a distinct improvement in some cases in the figures, but the heavy dorics and antiques are not always beautiful, and their extreme weight occasionally detracts from their legibility, while a good figure of moderate weight is much more pleasant to look upon and just as easy to read.

We cannot refer particularly to all the calendars that we have received, but the most notable one is perhaps that issued by the Sun Engraving Company, which has been designed throughout by Kennedy North, and is symbolical in treatment, as is much of this designer's work. In the centre of the design is the sun, with a sundial, and round this are depicted the twelve constellations of the imaginary zone of the heavens, within which lie the paths of the sun, moon, and principal planets. Each month of the calendar has the symbol of the sign which corresponds to it.

The Pelican Press have a strikingly simple design most effectively printed in orange and black.

Messrs. H. J. Goss & Co., Ltd., send an attractive calendar with vigorous colouring in the style of the modern school of poster design.

Messrs. Charles Thurman & Sons, of Carlisle, show a colour print after a drawing by Simpson. The costume and treatment are in the period in which the firm was established in 1816.

The Hills Press, of Sunderland, send a distinctly original idea of an engagement pad, a thick bevelled board is covered with a thin paper, giving a close imitation of veneer, and the effect of the whole design is quiet and likely to be used for the purpose for which it was intended.

Messrs. E. T. D. Stevens, of Leicester, have produced an admirable calendar by the offset process, with a beautifully drawn and printed design of St. Mary's Church. Perhaps the imitation deckle edges of the paper might have been dispensed with.

Messrs. Slater & Palmer have an ingenious and original idea. The calendar is one page to a month, and at the sides of the monthly pages are pierced holes through which can be seen some of their colours which are mounted on the back sheet The monthly sheets vary in colour to match these shades, the plan being that the colours are in fair contrast so as to suggest to printers suitable shades for any two-colour job.

The most ambitious piece of printing is submitted by Messrs. Wass, Pritchard & Co., Ltd., who have reproduced by offset a painting of wallflowers by Hubner. This is drawn work, but the printing is eminently satisfactory.

Messrs. Samuel Jones & Co., Ltd., of Bridewell Place, have a strikingly original cut-out design of their Butterfly trade mark with two wire attenæ.

Messrs. J. & W. Mitchell, Ltd., of Birmingham, utilise each successive month to show a specimen of one or other of their speciality papers, among which may be mentioned their black poster and aluminium papers.

Among the other firms who have sent calendars are the County Press, of Newport, Isle of Wight; Messrs. Blackwell & Co., Ltd., printing ink manufacturers, giving an example of the use of both their litho and three-colour inks; a very large useful office calendar, month to a page, from Thomas E. Bingley, Central Printing Works, Leicester; Messrs. L. S. Dixon & Co., Ltd., of Liverpool, who sent a card with Post Office and other information on one side and a calendar on the other, and also larger cards with the whole calendar printed on them; McKern's, of Limerick; Messrs. F. G. & J. Jubb, of Leeds, who sent their usual block calendar and also one published by Forman Bros., of Nottingham, with drawings by Lawson Wood; Messrs. Kenton Bros. & Co., printers, of London; Messrs. E. A. Braddick, Ltd., of Gough Square; Messrs. Pavyers & Bullen, of Crome Street, London; Messrs. Flowerdew & Co., of the Strand; and an almanac for 1925 sent by The Blackpool Gazette and Herald, which has as its chief feature a striking picture of Poulton Market Place fifty years ago, printed by an entirely new method of litho offset printing in their litho department.

Open Competition for Printers and Bookbinders

IN connection with the Royal Society of Arts a competition will be held this year for the encouragement of the study of designs for industrial purposes.

In book production the subjects of competition are as follows:—

(1) Designs for either or both of the following:—
(*a*) A title page entirely set from type, with or without printers' ornaments; (*b*) a title page partly decorated. The title pages to be taken from any or all of the following:—
(*a*) "The History of Tom Jones, a Foundling," by Henry Fielding. (Size, demy quarto).
(*b*) "On the Morning of Christ's Nativity," by John Milton. (Size, crown quarto).
(*c*) A scientific paper. (Size, demy octavo).
The copy in each case will be supplied by the Royal Society of Arts.

(2) Designs for three pages of text, with chapter heading, from any or all of the books enumerated in Section 2 above, and in the sizes respectively indicated there.
The copy for (*c*) will be supplied by the Royal Society of Arts.

(3) Designs for either (*a*) a line illustration, or (*b*) a colour illustration.
(The subject of the design must be taken from a well-known book, *e.g.*, one included in the World's Classics or Everyman's Library.) The design may be drawn to any size, but must be suitable for illustrating a crown quarto page 12½ in. by 10 in.

(4) An all-over design suitable for general use as either (*a*) an end-paper, or (*b*) a cover paper. N.B.—Paper jackets are not eligible.

(5) Design for a binding for "The History of Tom Jones, Foundling," by Henry Fielding, in cloth (blocked).

(6) Design for a binding for "The History of Tom Jones, Foundling," by Henry Fielding, in leather (tooled).

All designs must be submitted on paper, and not as finished articles.

Prizes offered: A prize of not less than £10 10s. is offered for each of the subjects set forth above.

Of special interest to printers are the following:—

Messrs. Cadbury Brothers, Ltd., offer a Cadbury Bournville Travelling Scholarship of £50 for one year in each of the years 1925-27. The winner will be required to travel on the Continent of Europe for the development of his or her art.

The subjects for competition are:—

(1) A poster drawing attention to the value of cocoa for children.

(2) A poster advertising chocolate.

Candidates may enter for either or both of the foregoing subjects.

The award will be subject to the under-mentioned conditions:—

(*a*) The judges shall be three in number, of whom two shall be appointed by the Royal Society of Arts and one by Messrs. Cadbury Brothers, Ltd.

(*b*) The scholarship winning design, with copyright, shall be the property of Messrs. Cadbury Brothers, Ltd.

Messrs. J. S. Fry & Sons, Ltd., of Bristol, offer two first prizes of £25 each and two second prizes of £10 each for the following subjects:—

(1) A design in four or five colours suitable for a lid and front label for display box, including lettering. The design can be associated with any name or title selected by the competitor, design and name being suitable for chocolate assortment boxes. Size not to exceed 11 in. by 7 in.

(2) A wrapper in one colour, appropriate to the name of "Somerdale." Size not to exceed 6¾ ins. by 3 ins. Special attention to be given to the style of lettering.

The awards will be subject to the under-mentioned conditions:—

(*a*) The judges shall be three in number, of whom two shall be appointed by the Royal Society of Arts and one by Messrs. J. S. Fry & Sons, Ltd.

(*b*) The prize-winning designs, with copyright, shall be the property of Messrs. J. S. Fry & Sons, Ltd.

(*c*) The designs submitted must be original, and should be of a character that would be understood and appreciated by the general public.

Messrs. Lever Brothers, Ltd., offer a prize of £50 for a poster design to advertise "Sunlight Soap." The design is to be executed for reproduction by lithography in not more than seven colours. It is to be in the proportion of 16 sheets, and not smaller than 30 ins. by 20 ins.

The award will be subject to the under-mentioned conditions:—

(*a*) The judges shall be three in number, of whom two shall be appointed by the Royal Society of Arts and one by Messrs. Lever Brothers, Ltd.

(*b*) The prize-winning design, with copyright, shall be the property of Messrs. Lever Brothers, Ltd.

Messrs. Nestlé offer three prizes of £50, £25, and £10 respectively, for poster designs to advertise Nestlé's milk; and three prizes of £25, £10 and £5 respectively, for poster designs to advertise Ideal milk.

The designs must be suitable for reproduction by lithography in not more than seven colours. The size must be not less than 30 ins. deep by 20 ins. wide, or in that proportion. Too much detail should be carefully avoided. Great credit will be given for originality of ideas and power to arrest attention.

The awards will be subject to the under-mentioned conditions:—

(*a*) The judges shall be three in number, of whom two shall be appointed by the Royal Society of Arts and one by Messrs. Nestlé.

(*b*) The prize-winning designs shall be the property of Messrs. Nestlé, including the full copyright, with all rights of reproduction, although there shall be no obligation on the part of Messrs. Nestlé to use them.

Messrs. A. & F. Pears, Ltd., offer a prize of £25 for a design for a Christmas Gift Box containing toilet accessories. The size of the box is approximately 9½ ins. by 6 ins. by 2¾ ins. The choice of the material, metal, wood, etc., is left to the designer, but the wholesale cost of the box for 10,000 must not exceed £600. The design may, at the option of the competitor, indicate that the box is a Christmas gift box made by A. & F. Pears, Ltd., London. It is not essential to introduce any words, but if candidates decide to do so they are advised to pay special attention to the lettering.

The award will be subject to the under-mentioned conditions:—

(*a*) The judges shall be three in number, of whom two shall be appointed by the Royal Society of Arts and one by Messrs. A. & F. Pears, Ltd.

(*b*) The prize-winning design, with copyright, shall be the property of Messrs. A. & F. Pears, Ltd.

The proprietors of The Graphic offer a prize of £25 for a design in three colours, suitable for the cover of a Christmas number of The Graphic, on the following conditions:—

(1) The judges shall be three in number, of whom two shall be appointed by the Royal Society of Arts and one by the proprietors of The Graphic.

(2) The prize design, with copyright, shall be the property of the proprietors of The Graphic.

(3) The designs submitted should be of a character that would be understood and appreciated by the general public.

(4) The proprietors of The Graphic shall have the right to select any other designs, on the payment of sums of £12 12s. and upwards, according to their merits.

Intending competitors should note that entries can only be received from individual designers, and not from firms; and that they must communicate between May 1 and 15 with the Secretary of the Royal Society of Arts, John Street, Adelphi, W.C.2, as to the despatch of their designs.

The Typographical Association and Technical Classes

ALL technical classes in typography at the Harris Institute, Preston, have been suspended owing to a dispute between the instructors in these printing subjects and the Council of the Institute.

The point in dispute is very simple, but very interesting. One of the students attending these classes was a clerk in the Blackpool Corporation Stationery Office. The local committee of the Typographical Society objected to the tuition of a pupil at these technical classes who was not connected with the trade. Mr. R. C. Pye, one of the instructors, refused to accept this decision. His argument was that it would be of advantage to a stationery clerk to see and so thoroughly understand the relationhip of workshop practice with his work in the office.

An appeal was made to the Executive of the parent Typographical Association, and this body supported the action of the branch committee. The Council of the Institute persisted in admitting the student. This was followed by the resignation of the instructor and its acceptance, and the suspension of the classes.

Mr. Pye's resignation was evidently made in loyalty to the Typographical Association, for in a pamphlet which he has issued containing the whole of the correspondence on this matter he regrets that the T.A. takes what he considers to be an exceedingly narrow view in this matter. It is further pointed out by Mr. Pye for the consideration of the master printers that the scheme for the education and training of apprentices, approved and adopted by the Joint Industrial Council of the Printing and Allied Trades of the United Kingdom, will be impossible of application—so far as Preston is concerned—if the present administration of the Harris Institute is allowed to continue.

The matter has been before the Preston Town Council, and after some discussion on the legal position of the Governors of the Institute under its trust deeds further consideration of the matter was postponed.

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Some Surprising Figures

IF the average person were asked to name the biggest industry in Great Britain it is doubtful if he would give the correct answer. And it is just as doubtful if he could say which industry in the country employs most men. The newly-published Census of Occupations in England and Wales will bring disillusionment to many people, especially to those who visualise "the working men" as almost entirely those who tear up the roads. The real key industry people will come as a surprise.

This new mass of statistics is also interesting because it throws into bold relief the extent to which women have invaded the industrial world.

The biggest industry in the country is that of "personal service." The gigantic army of people catering for the personal comforts of their fellow creatures, which includes the whole gamut of servants and people employed by institutions, clubs, and hotels, numbered 1,676,425, females 339,944. Indoor domestic servants are the infantry of the army. They numbered 1,148,698 women and 61,006 men.

There are more people engaged on the land than in the mines and quarries. Agricultural occupations employed 1,171,298 males and 83,052 females. Mines and quarries engaged 1,061,749 males and 3,364 females.

There are more women than men in professional occupations, excluding clerical staffs, but including religious organisations, law, medicine, etc. They numbered 359,982 females and 306,830 males.

Aliens are by no means composed mainly of the insinuating gentry of the serviette and wine list. The making of textile goods and articles employed most, namely, 21,920 males and 7,474 females. They were also occupied.

In commerce, finance, and insurance, 21,262; in transport and communication, 10,539; in personal service, 24,554.

The order of numerical strength was: (1) Russians, (2) Poles, (3) French, (4) Italians, (5) Germans.

The Right Way to Look at Things in the Printing Trade

MR. H. G. TANNER, of Messrs. Robinson, Ltd., Bristol, delivered a most interesting and lucid speech at the last annual Federation meetings at Norwich on Profit-sharing. There was a very general feeling then, which we heartily shared, that Mr. Tanner's viewpoint was thoroughly sane and convincing. It would be a great benefit if such opinions could be placed before joint meetings of employers and employed throughout the country.

Addressing the industrial conference of employers and business administrators at Balliol College, Oxford, last month, Mr. Tanner said that in industry there was too much of the spirit of the old catechism—of expecting people to be content with their station of life. More opportunities of advancement should be possible. We had not reached the time when we could be complacent about the conditions in industry. Every wise employer and great industry should do their best to enable men and women to develop personality. This could not be done if these men and women were making useless or harmful articles. How could they be self-respecting? In his opinion there ought to be a better selection and training of those entering industry, to avoid anomalies such as that of a colour-blind youth working for four or five years in a colour process, before finding that he could go no further with it.

More frankness was desirable between management and employes. If a man made an article for 1s. 6d., and saw it sold for 7s. 6d., he believed that a profit of 6s. was being made. This bred distrust, but it was the fault of the management for keeping him ignorant as to overhead charges. Management often thought that holidays were necessary for itself, but that the employes needed much less, and should be fined even then by not being paid. He found that he wanted more money when he was on holiday. For forty years his firm had paid their employes when they were on holiday, and it was the best investment they had ever made.

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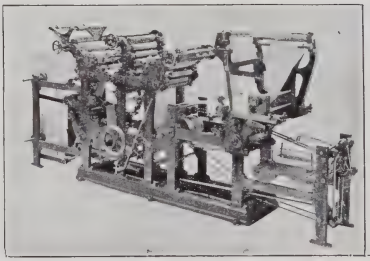
Rotary Counter Check Book Machines,

Printing Front and Back, Numbering, Perforating, Folding, and Round Hole Punching, delivering 30,000 duplicate sheets per hour.



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TRADE NEWS

The Process Engravers at the Printing Exhibition

The Federation of Master Process Engravers has issued some attractive illustrations of the North Gallery Annexe at the Agricultural Hall as it is planned for the combined exhibit of this Association at the exhibition in May. There are ten alcoves already allotted, one of which is to be fitted as a general office for the use of members. The central part of the hall will be arranged for visitors. Wall space is reserved for the use of members who are not occupying alcoves.

Box-Making Machinery

A new catalogue illustrating and describing a complete range of machines for the economical manufacture of cardboard and paper boxes has just been published by Messrs. M. C. Ritchie, Ltd., 145, Farringdon Road, E.C.1. The modern box-making machine is one of the marvels of printing engineering skill. In this catalogue are to be found full descriptions and specifications of many of the auxiliary machines also necessary to this work—folding, glueing, cutting and creasing, guillotining, scoring, bending and creasing, corner-cutting, slotting, piercing-on, staying, banding, and many others—and all those engaged in this industry will be interested in this carefully prepared booklet.

The "Baby" Ruling Machine

Messrs. Soldans, Ltd., are advertising in the columns of this issue a "Baby" Jobbing Disc Ruling Machine referred to by us in a recent number. This wonderful little machine not only rules, but cuts, creases, and perforates. We are informed by Messrs. Soldans that it is being well received by the trade, proving itself in every way satisfactory where installed. In the firm's showrooms at 44-46, Eagle Street, W.C.1, can be seen the very latest in stop-cylinder machines known as the "Record." They claim the title is a fitting one, and the firm are confident that personal inspection will justify this opinion. The machine is fitted with pyramid inking of the most approved type, and is provided with an efficient cylinder check. The fact that over 300 machines have been in use during the last three years speaks for its good qualities.

Mr. Austen-Leigh Honoured

Mr. R. A. Austen-Leigh, who was President of the Master Printers' Federation of Great Britain and Ireland for 1922-23, was, at the January meeting of the members of the Council held in London, presented with his portrait, painted by Mr. Charles Shannon, R.A., as a mark of appreciation of his services to the printing industry.

Lieut.-Colonel H. Rivers Fletcher, the immediate past-president, in referring to Mr. R. A. Austen-Leigh's work, commented on his efforts in connection with the introduction of correct costing methods, his trips to America, Holland, Belgium, France, and Sweden on behalf of the international organisation, and his interest in the educational work of the Stationers' Company of London.

Mr. W. B. Wykes, President of the Federation, in handing over the portrait, which is a splendid example of Mr. Shannon's work, alluded to the many important offices Mr. Austen-Leigh had occupied, including the presidency of the London Master Printers' Association, the Federation, and the East Anglian Alliance.

Mr. Austen-Leigh, in acknowledging the gift, expressed the pleasure it had given him to do anything to serve the great and historic craft of printing.

New Managing Director of Lanston Monotype Corporation

It will be of interest to his many friends that Mr. W. I. Burch has been appointed managing director of the Lanston Monotype Corporation, Ltd., in succession to the late Mr. H. M. Duncan. The Lanston Monotype Corporation, Ltd., was established in December, 1897, and Mr. Burch joined in the following March, so his appointment as managing director comes after an association of twenty-seven years with the firm. During the whole of this period Mr. Burch has acted as secretary to the Corporation and for many years as manager, and in 1917 was appointed a director. The new secretary of the Corporation is Mr. H. R. Reid, who has been Mr. Burch's assistant for a great many years.

The Canadian-American Machinery Co., Ltd., are sending out a three-colour folder produced by Messrs. Clarke & Sherwell, Ltd., Northampton, on their Kelly presses, which is an excellent example of the process work done on these machines. Incidentally the fold of this leaflet serves to illustrate the work of the Cleveland folder.

PASSE-PARTOUT
SHOWCARDS

Showcards get very dirty and curl—they are then thrown away. Persuade your customer to have them Passe-Partout style, i.e., covered with glass with a neat paper edge and strutted or eyelette:. It will double the life of the card and increase your order. You make the :: showcard. We will do the rest. ::

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Obituary

Mr. A. E. Parsons.—We regret to report the death of Mr. A. E. Parsons, of Messrs. Herring, Dewick & Cripps, paper merchants, London, which occurred with great suddenness.

Mr. G. Stanley Philip, who retired some eighteen months ago from the position of chairman and general manager of Messrs. George Philip & Son, Ltd., the well-known map publishers, which he had held for many years, has passed away. He had been connected with the business for over forty years, both before and after its formation into a limited company, and his death will be much regretted by all with whom he came into contact, both in his private and business relationships.

Mr. Rowland Smart.—We regret to announce the death, on New Year's Eve, of Mr. Rowland Smart, Warwick Road, Carlisle. Mr. Smart, who had been seriously ill for about a fortnight, was sixty-five years of age, and had been for fifty-two years in the service of Messrs. C. Thurnam & Sons, English Street, Carlisle. He joined as an apprentice, becoming printer's reader later, and then becoming overseer of the printing department, in succession to the late Mr. Pattinson, thirty years ago. He was thoroughly versed in the technical side of printing, and his services were highly valued by the firm. On the celebration of his jubilee two years ago, the firm presented him with a gold watch, a piece of silver also being given to Mrs. Smart, who survives him.

Many men engaged in all branches of the printing craft will hear with regret of the sudden death of Mr. Herbert Clarke, J.P., chairman and chief proprietor of the firm of W. Speaight & Sons, Ltd., Fetter Lane and Norwich Street, London. Mr. Clarke, who was also proprietor and editor of The Christian World, was actively engaged in his business concerns and apparently in his usual health until Wednesday evening, January 21, when, as he was leaving for his home, he was seized with illness. He was removed to St. Bartholomew's Hospital, but died on Thursday morning without regaining consciousness. The third and last surviving son of James Clarke, the founder of The Christian World, Mr. Herbert Clarke was born on January 16, 1863, educated at Mill Hill, and before entering business life was sent on a world tour, during which he spent some time in Australia. Returning to London, he joined his father at 13, Fleet Street, and at once began to take a very keen interest in printing processes. He was quick to see the manifold advantages that would accrue from the substitution of electricity for steam in printing machinery, and from that time onward he never lost his zest for adopting the newest methods and devices in newspaper printing. Among his many interests this delight in mechanism was one of the strongest, and made him a pioneer in printing progress. Mr. Clarke was a shrewd business man, singularly averse from all self-advertisement, and reluctant to be thrust into any sort of publicity. His relations with his staff and employes were very happy, and he won respect for his strong sense of justice and his gentle spirit.

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Miscellaneous Advertisements

MACHINERY FOR SALE.

Multi-colour Machine.—Takes sheet 10 in. by 8 in., complete with motor. Price £80.

Quad-demy Reversus (Dawson).—Fitted rotary slitter and Klimsch counter, Slogger feeder. Price £300.

Brehmer Folding Machine (Quad-crown).—Complete with continuous sheet feeder; two, three, or four-fold. Price £350.

Brehmer Folding Machine (Quad-crown).—Complete with Camco feeder; two, three, or four-fold. Price £250.

Three Section-folding Machines (by Krause).—Maximum sheet 30 in., minimum sheet 8 in. Speed 2,500 sections per hour. Price £30 each.

Drilling Machine (Strong, Bristol).—Price £3.

Rupert Bundling Press. Price £2 10s.

Two Gold-blocking Presses (O. Friedheim).—Maximum size 10 in. by 8 in. Price £20 each.

End-sheet Pasting Machine (Brehmer). Price £15.

Book-sewing Machine (Brehmer No. 38). Price £90.

All the foregoing machines are in full working order, and may be seen running by appointment with the Factory Manager, Messrs. E. J. Arnold & Son, Ltd., Butterley Street, Hunslet Lane, Leeds. All offered subject to intermediate sale. Any reasonable offers will be considered.

Intertype.—Model D., s.m.; fully equipped with Cheltenham faces; installed two years; reasonable price for quick sale.—Apply W. Houldershaw, 49, London Road, Southend-on-Sea.

The proprietor of British Patent No. 171,099, dated November 3, 1920, relating to "Device and Element for the production of Registering Strips for Automatic Type Composing Machines," is desirous of entering into arrangements by way of a licence or otherwise on reasonable terms for the purpose of exploiting the above patent and ensuring its practical working in Great Britain. All inquiries to be addressed to F. Heron Rogers, Bridge House, 181, Queen Victoria Street, London, E.C.4.

The Caxton Magazine

ESTABLISHED 1899

Published on the first of every month by F. W. BRIDGES, LTD., Avenue Chambers, 4, Vernon Place, Southampton Row, W.C.1.

Telephone; MUSEUM 6663-4. Telegrams: SEGDIRB (WESTCENT) LONDON.

¶ SUBSCRIPTION RATES payable in advance. 12/6 per annum, post free to any part of the world.
¶ ADVERTISING RATES upon application.
¶ Alterations in current Advertisements must reach this Office not later than the 16th of each month, failing which the Advertisement wil appear in the same form as in the last issue.

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Small Advertisements, together with remittance, should reach the Publishing Office not later than the 21st of each month.

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All Editorial Communications should be addressed to the Editor, THE CAXTON MAGAZINE, Avenue Chambers, Southampton Row, London, W.C.

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GOUDY HANDTOOLED

10 Point
MEN GRADUATE
Students from many states complete their

12 Point
INDEPENDENT
Remote little isles given opportunity

14 Point
BURLESQUE
European light opera with fine

18 Point
THE ATF!
Shortt & Co supply this.

24 Point
HOCKEY
Ice skating

30 Point
RECIPE
Nymphs

36 Point
Ensure

42 Point
Herds

72 Point
Dial

60 Point
Sight

48 Point
Epoch

GOUDY HANDTOOLED ITALIC

72 Point
Bird

60 Point
Eight

48 Point
Judges

24 Point
GNOMES
Responded

30 Point
FROND
Naughty

36 Point
Norton

42 Point
Spirits

10 Point
HUNTING HORSE
Southern equestrians display unusual skill

12 Point
SUBSCRIPTION
Notable magazine increasing number

14 Point
MODERNIZE
Improved ways of manufacture

18 Point
THE ATF!
Shortt & Co supply this.

Sole Agents for The American Type Founders Company
C. W. SHORTT & CO. LTD,
8 FULWOOD PLACE, HIGH HOLBORN, LONDON, W.C.1.

A.T.F. 24-pt Rosa Border No. 10.

THE CAXTON MAGAZINE
A PROGRESSIVE ORGAN OF THE GRAPHIC ARTS
Edited by A. E. OWEN-JONES

The Proportional System:
Criticisms and Continuations

BY JAMES GUTHRIE (The Pear Tree Press).

THE arrangement of prose and verse in proportionate mass upon the page having been described and demonstrated by diagrams, it remains to notice a few criticisms which have been made, and also to carry the subject a stage further. At once it should be understood that for the immense variety of matter handled by the average printing office there is no such thing imaginable as a method simple enough to render intelligence unnecessary, nor can any guidance be given which solves every problem offhand. This is rather fortunate than otherwise, as none of our standardising of material will ever succeed in obliterating those distinguishing characteristic difficulties of printing. Variety of presentation will always remain the counterpart of text which demands so many different effects. Books of prose excepted, there is hardly anything capable of regulation by a general rule, and, even with these, we have not an absolute dull level at a time when publishers are alive to the advantages of settings, which, if not individual to particular books, are a sure index of how much or little taste goes to their production as a whole.

GOOD TASTE OR NO TASTE.

The case for a work produced in good taste is one deserving of more attention than it receives. A neat binding and a simple title frequently act as disguise for text set in poor type without distinction. The general opinion accepts a book that is moderately legible. Refinement in taste, developed by study and familiarity with better models, achieves more by demanding something in addition to legibility. Indeed, it often seems as though the primitive desire for words that are easy to read is a kind of warrant for poor printing, even while its intention is excellent so far as it goes. Many printers appear to have no special devotion to any operation except the lopping of chunks of matter into shape more or less appropriate for pages of books, journals, or newspapers; which is no doubt quite proper, but not greatly exciting when we are looking in detail for something better. There is the rule about proportion to assist them in the broadest possible way, and, if they care for further excellence, the study of line-endings and the regulation of indentation afford further scope. They can by these means easily surpass the ordinary sort of setting which is more by custom than design, and, to give them their due, they find a use for any method that does not call for great change or dislocation of routine.

THE SETTING OF VERSE.

Verse and display are both more difficult to bring within definite regulation. At first glance they seem easier to handle because the strict justification of prose is absent, or at least not obtrusively essential where lines vary in length up and down the page. Verse, however, is not easier, but more difficult, precisely by reason of its need for an orderly shape upon the page. Set as it is written, a hopelessly ragged appearance would result, creditable neither to the poet nor to the compositor. But no poet or bookman of any sort exists who does not at once recognise the advantage of vertically-ranged lengths, pleasing both as a pattern upon the page and as a sign of good workmanship, if not actually of good poetry. The essence of poetry being form, there is a peculiar fitness in refined setting where verse is concerned. Those who have taken exception to wide spacing, as a fault peculiar to the new setting, overlook the fact that a page of prose is seldom without some wide and some close passages. Composition does, in fact, already undertake this adjustment of matter within a given length, and it calls for no great violence to justify varying lines so that they fall within certain tactfully-chosen limits, and thus attain order instead of the complete formlessness which is so commonly seen in books of poetry.

Matter for criticism of any system of composition lies rather in how much or how little it can be applied to varying text in the same book, and especially a book of verse; for no rule for the shape of pages can vary sufficiently to keep pace with so many changes, except on the assumption that each page exists only for itself, which is unfortunately impossible. Some general shape will usually be found, nevertheless, in accordance with the prevailing longest lines and the idea of proportion. Blank verse and sonnets come most happily, with a little management. For the rest, the grouping of shorter lines, a well-judged first or second position, and a judicious regularity in the titles and top lines, provide against most of the pitfalls which lurk in this kind of book. Other obvious connections between pages, if the compositor be curious enough to study them, lie in intervals. These may often be ranged to occur regularly on verso and recto, so that even when the matter does not exactly balance, it is yet harmoniously placed in relation by the adjustment of the white paper area. Poems containing few verses may bear rather wide intervals, according to the general spirit of the whole setting.

And should this spirit be a bold one, short-lined verses might be placed to left and right, alternately touching the vertical limits of the proportional figure instead of meandering in a thin stream of type through the pages as they usually do.

Next to well-filled pages and compactly-set matter, a good balance should be sought after. And, although a regular rule for indentation, and for the intervals between verses, and so forth, is often assumed, it is in those adjustable particulars that the unison of opposite pages can often be found. We certainly cannot set the poems in any poetry book as though they were to be read from a galley proof, which is a merely a mechanical device, a stage in the process of building up the text. Properly designed, this first stage should indeed be correct enough not to need alteration as regards spacing; but the lay-out will almost surely determine details obvious only when the written text has been translated into metal and is seen in plain print.

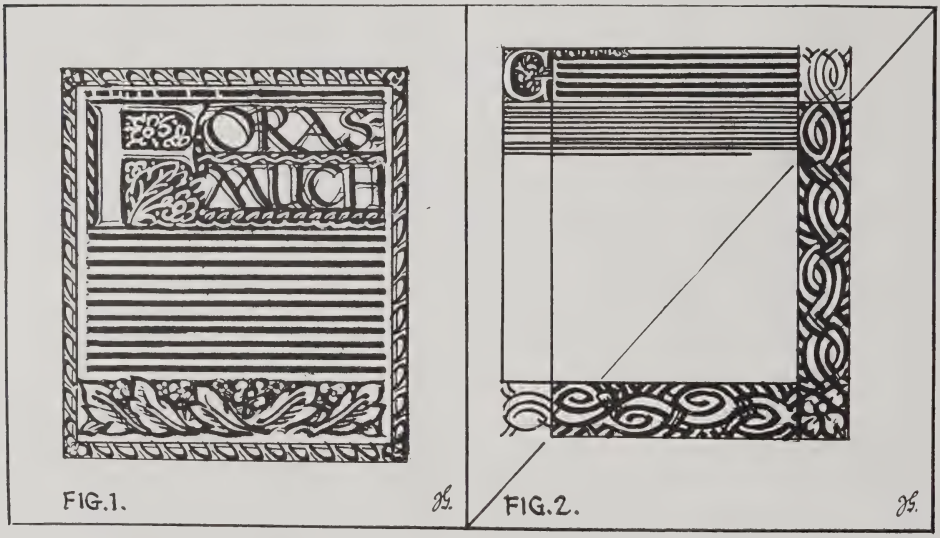

FIG. 1.

FIG. 2.

THE USE OF DIAGRAMS.

Diagrams for use in composition, it is sometimes objected, are easier to invent than apply. They are, moreover, apt to suggest a barren and uninteresting formula, without grace, freedom, or richness. The diagram, however, does not aim at being an example, although it may be. Those graceful free settings which will not bear examination would be no less beautiful if they were controlled by structural ideas, if we could feel behind them some sense of discipline. There is something natural and proper in this conception of form. A delicate ear detects the appreciation of correct form in poetry which breaks the strict shape; but a clumsy hand betrays itself at once, and in a few lines reveals the very ignorance which seems so carefully hidden. This is exactly the case with typographical composition, and our diagrams are constructed upon the general rule, as a guide to at least one method of converting a manuscript into a book. What may be added by way of delicacy or strength of ornament, it is not strictly speaking the business of any structural sketch to describe. If, on the contrary, everything could be set forth and allowed for beforehand, the element which continually reminds us that printing is an art would have disappeared, and we should be the prey of fool-proof devices. For, while we labour to improve and to progress; while we are all the time aware of a load of difficulty, and even our most finished performance haunts us, we cannot desire—and, indeed, we need not, for all the difference it will make—a complete victory over material. The inflexibility of metal often tempts printers to regard the whole thing as a branch of engineering. Their dream is that matter will be assembled, made in one piece, which, by pressing a button, will print perfect books, while they, with ample leisure and all the comforts, admire the scenery! One visionary went so far as to describe the glories of journalism when writing and printing had been done away with altogether, forgetful apparently of the fact that mankind does not seek the abolition of these things, and that he was merely revealing his own lack of vital contact with them.

WHAT A SYSTEM IS FOR.

Systematic technique is no more than a skeleton, a scaffolding, or ground-plan. By general acceptation the regulation of form becomes a kind of language by means of which varieties are understood. In printing we have been long on the way, because while there are in all ages those who take pleasure in adventure, experiment and research are usually looked upon as a hobby, a pleasant pursuit of an unprofitable sort. Also there is always more opposition to than favour for new ideas, especially if they are not immediately or easily put into use, or we should long ago have formulated our stock of common knowledge and placed it at the disposal of every printer. It is true that the works of the masters remain; but how may we examine them? It is true that we have text-books designed for the student; but how often are they systematic in any real way? Arguing from variety, we gain nothing but bewilderment. The only possible method is the

demonstration of exact rules; for then departures are recognisable, as much as obedience is, by reference to the same laws.

WHAT REMAINS TO BE DONE.

Printing may be divided into three convenient kinds—the ordinary commercial, the fine, the spectacular. Each of these acts upon the other, and if we possessed a clearing-house or focus for ideas,

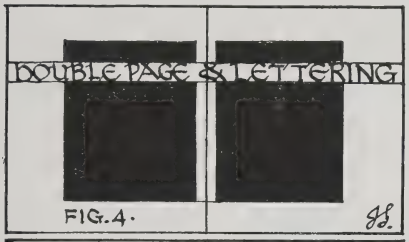

FIG.4.

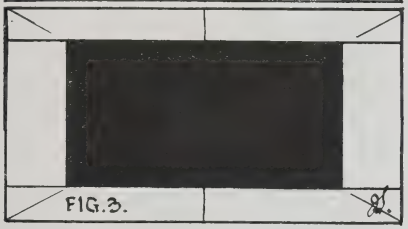
FIG.3.

they would act still more strongly upon each other, and should not merely fumble among old books for improvement. At the present time a revival is taking place in fine printing, which finds an echo in all kinds of plain and coloured productions. The principles which govern typography are only one set of laws, although they lie at the roots of all the rest. Guidance in the matter of colour, rules governing decoration, and much more necessary knowledge, are as yet absent. And, strong as the feeling is that art is different from commerce, it arises from a wrong conception of art, and perhaps of commerce also. Construction, the underlying principle by which things are made, is the art of all work in stone or wood, paint or language. The same applies here. We may deny it; but it remains

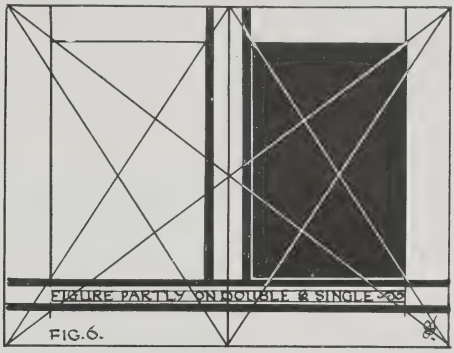

FIG.6.

our master all the same. The only resource is knowledge. By ordinary means, by hand or machine, good work can be achieved as easily as bad. Good colour is as workable, good design as practical. There is no excuse for bad work on the score of cheapness. Garish colour often makes a vain appeal. Display often fails for want of judgment and design. The pretensions of old styles do

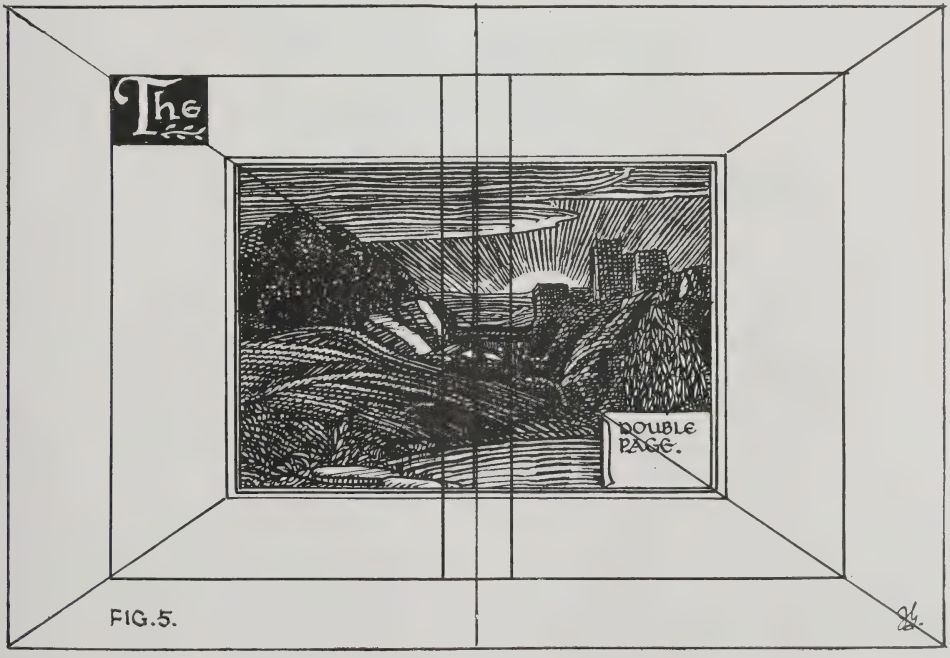

FIG.5.

not make up for their application to an ill-chosen text. These are, indeed, signs of retreat, not advance, and they would be avoided if they were put in their right category, and given into the right hands. What has been named spectacular printing embraces display, advertisements, posters and the like. Here, the designer must possess a sense of effect; he must be able to lay traps for the eye by knowing what to subdue and what to emphasise. A large mass of bright colour may as likely be ineffective, unless by artful contrast with plain monochrome or another colour it is given its full value. Again, this is a matter of knowledge, knowledge as natural to one man as it is alien to another.

DESCRIPTIONS OF DIAGRAMS.

Fig. 1.—Simple framework and initial in proportion.

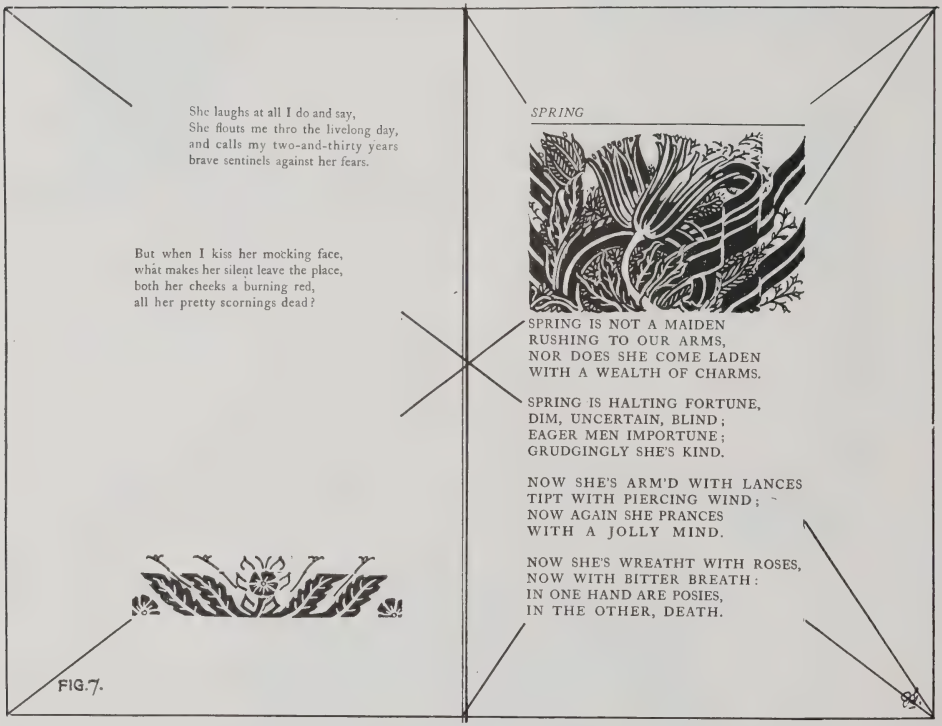
She laughs at all I do and say,
She flouts me thro the livelong day,
and calls my two-and-thirty years
brave sentinels against her fears.
But when I kiss her mocking face,
what makes her silent leave the place,
both her cheeks a burning red,
all her pretty scornings dead?
FIG.7.
SPRING
SPRING IS NOT A MAIDEN
RUSHING TO OUR ARMS,
NOR DOES SHE COME LADEN
WITH A WEALTH OF CHARMS.
SPRING IS HALTING FORTUNE,
DIM, UNCERTAIN, BLIND;
EAGER MEN IMPORTUNE;
GRUDGINGLY SHE'S KIND.
NOW SHE'S ARM'D WITH LANCES
TIPT WITH PIERCING WIND;
NOW AGAIN SHE PRANCES
WITH A JOLLY MIND.
NOW SHE'S WREATHT WITH ROSES,
NOW WITH BITTER BREATH:
IN ONE HAND ARE POSIES,
IN THE OTHER, DEATH.

Fig. 2.—Matter in second position, and ornament in first position. This border is emphasised to illustrate arrangement; but the same area might be utilised for a light spray or scroll work.

Figs. 3 and 4.—Proportion applied to a double page. Fig. 3 is shown with extended horizontals to suggest one treatment of marginal areas for lettering or decoration, or to expand the horizontal effect of two pages treated as one.

Fig. 4 shows a similar mass divided at the inner margins by half width of top margin, and interrupted by a horizontal band of lettering or ornament suitable for display. The construction by diagonals of single page construction are made use of in determining lower horizontal line of the band.

Fig. 5.—Double-page opening, with illustration and title-scroll in proportion. The outer figure is divided into two pages by width of top margin, and the wider proportion is used to carry a word instead of an initial. This figure is suitable for bookwork or for matter complete in two pages. The first position, though not essential, is generally suitable for a double-page plan, the side margins being wider. In a narrow upright page the top and bottom margins allow more movement.

Fig. 6.—Divided double page constructed partly on its own and single-page diagonals, with suggested bands of ornament, and lettering to connect the whole. Margins squared to emphasise verticals above the horizontal band. This design appears more formal in diagram than in actual practice with type, rules, and ornament.

Fig. 7.—A double 4-page verse setting. Type area made to fall on single-page diagonals at inner edges. Verso is an arrangement of shorter line verses, which constitute the chief difficulty in a mixed book. This is left in the design as it falls, with the awkward gap at the top left-hand. Ornament added could preserve the shape of the page; but in a plain or partly-decorated book the narrow verses can only be arranged within the general figure that is decided by the longest lines or according to a variety like this.

The ornament on the recto page (made upon the proof) carries the vertical lines upwards from the line-endings. This might be less obvious, but is shown as one of the means by which design for book-decoration may be drawn with reference to forms already determined, such as line-endings, above and below, or the intervals between verses, etc.

"For Fifty Years"

Jubilees at the House of Bemrose

THE House of Bemrose—for such is the title printers euphemistically give to Messrs. Bemrose & Sons, Ltd.—was in felicitous mood last month, when all those attached to the firm assembled in the Central Hall, Derby, to commemorate Brigadier-General W. Wright Bemrose's fifty years' association with the establishment of which he is chairman. To General Bemrose, the employes—and there are over seven hundred—presented an illuminated address and his portrait in oils by the gifted Derby artist, Mr. Ernest Townsend; and to Mrs. Wright Bemrose they gave a handsome pearl and diamond brooch set in platinum. But those were not the only presents made; in fact, the handing over of presents was on such a scale as to suggest a Christmas party, for General Bemrose, on behalf of himself and his fellow directors, handed certificates and cheques to a number of employes who had served the company for fifty years.

BRIGADIER-GENERAL W. WRIGHT BEMROSE.

Major Wörgan, who has a period of 45 years' service with the House of Bemrose, in conveying the congratulations of the gathering to General Bemrose, gave the following interesting particulars of the firm: Founded four generations ago by William Bemrose, Senr., a man of sterling character and integrity, fine business ability, and perhaps—if I might say so with all deference—the most worthy of the whole line of Bemrose; followed in the second generation by his two sons, the late William Bemrose, F.S.A., your respected father, sir, and Sir Henry Bemrose, names well known, not only in Derbyshire, but in the printing trade generally throughout the whole country; and then, in the third generation, our honoured Chairman of Directors, General Bemrose. (Hear, hear.) The firm of Bemrose shows that a single family through three generations, and well into the fourth, has maintained the traditions upon which its first success was founded. It shows that they can take up those traditions and develop and utilise them to meet new conditions or to seize new opportunities.

Coming to the more immediate purpose for which he had been invited to speak, Major Wörgan said: It has been said that genius is an infinite capacity for taking pains. A successful man of business must have all that, and also an infinite capacity for hard work. It seems to me that a business man who has to control such a large concern as ours must have a very definite policy, and must be able to analyse situations, grasp the essentials of those situations, be of sound judgment, form his conclusions quickly, and, perhaps what is most important of all, have courage to translate those conclusions into prompt action Those qualities I claim for General Bemrose. He has been chairman of directors of the House of Bemrose since the death of Sir Henry Bemrose in May, 1911, and during this period, and we hope for many years to come, he has taken a very active part in the development of the firm. It is quite impossible for me to give the life history of our principal. He is associated, and has been for many years, with various organisations which have been formed to consider the ways and means by which the printing and allied trades may be benefited. I believe I am right in saying that the printing trades have less open trouble and strikes, and that kind of thing, than most other trades in the kingdom. That is due, to a very great extent, to the various associations which have been formed in order to regulate the very difficult questions which from time to time arise. Now, apart from the important position the General holds in the firm, he has been for many years associated with these societies. I am going to read some of them:—

(*a*) Master Printers' Federation, of which he was the President as far back as 1912 and 1913.
(*b*) Joint Industrial Council, Chairman last year.
(*c*) Midland Alliance, first President.
(*d*) President of the Local Master Printers' Association.
(*e*) During the last two or three years a tremendous advance has been made in the association of two other firms of printers allied with us under the name of Universal Printers, of which he is also Chairman.

In all these various trade organisations, in which his opinions carry great weight and are highly respected by all the printing houses of the United Kingdom, he has attained the high positions of president and chairman, and this in itself speaks for the value attached to his judgment and the esteem in which he is held. He has been, and

is, a very active man in connection with various other smaller but important organisations in the printing trade.

In the Great War, the General, although not considered eligible for foreign service on account of medical disability, volunteered for any work that he could do, and was given the command of a home brigade. At the close of the war he was awarded the rank of Brigadier-General by the Army Council as a mark of appreciation for the splendid work he had done. (Hear, hear.)

No man has worked so hard and so efficiently for the good of the printing and allied trades as General Bemrose. No one, I believe, throughout the whole country enjoys a fuller measure of confidence and esteem from all those with whom he has come into contact. I believe, also, that after even the high praise that this conveys, he will appreciate even to a greater extent an expression from me on your behalf of our intense and undeviating loyalty to him. I will read to you this address:—

TO BRIGADIER-GENERAL W. WRIGHT BEMROSE, V.D., J.P., D.L.

We, the employes of Bemrose & Sons, Ltd., whose names are inscribed in this book, offer you our heartiest congratulations upon the completion of fifty years' active association with the firm. Under your sound judgment, wise administration, and never-failing energy, the business has steadiiy advanced; and to-day the name of Bemrose stands as a symbol of honour and integrity throughout the printing and allied trades.

Especially are we grateful for the interest you have always taken in our welfare, and for the sympathetic manner in which you have invariably handled matters within the House.

We ask you, as our friend and leader, to accept this tribute with the accompanying portrait as tokens of our esteem and affectionate regard.

It is our earnest desire that you may be blessed with a continuance of good health, and be spared to preside over the destinies of the firm for many years to come.

Signed on behalf of the employes,

CHAS. E. EVANS, Chairman of Committee.
F. W. COOPER.
C. A. CARTER.
P. J. MUDIE, Hon. Secretary.

Then follow over 700 names of subscribers. This is a fine specimen of binders' art done in the works, and I am quite sure you will appreciate it, and that in years to come you will glance through it with much interest.

We have with us this evening Mrs. Wright Bemrose, and it is my privilege to mark the occasion on your behalf by asking her acceptance of this brooch of pearls and diamonds set in platinum, as a tribute of our esteem and regard. Mrs. Bemrose, although not seen amongst us often, is an admirer, and, I am told, a severe critic, of our high-class productions. To me, however, Mrs. Bemrose will always find a grateful place in my heart, and I believe in many of yours also, for the great and kind work she did during the war. (Hear, hear.) During those terrible years, whilst the men were at the Front, Mrs. Bemrose on behalf of the firm undertook to look after the wives and families of those who were doing their bit at the Front. For myself, I shall never fail to be deeply grateful for the splendid way in which she looked after my wife, and I am quite sure that remark will find a sympathetic echo in the hearts of many others. Mrs. Bemrose, I have pleasure in asking you to accept this token of our esteem.

The climax to which my remarks have tended is the presentation of a portrait of the General, painted by our gifted townsman, Mr. Ernest Townsend. The actual presentation I am not permitted to make. It is to be done by one who has given 58 years' service to the firm. I hand over the privilege of making the presentation to our old friend, Mr. Carter.

Mr. Carter: General Bemrose, with our united and most sincere congratulations upon the completion of 50 years' close and active association with our good firm, in token of our high esteem and regard, and with our best wishes for many years of good health and strength to enable you to continue to direct the destinies of the firm, I ask you to accept the portrait which now stands unveiled before you.

Brig.-General Bemrose (who was received with prolonged applause) said: You have made this a very great day for me, a red-letter day, which neither my wife nor I will ever forget. Had you not done so, it might have passed as the other 15,000 days have passed since I first entered in the business. Now, some of you will think that it is an easy task for me to adequately thank you for this further expression of your goodwill, which you have expressed to-night, for the very, very pleasant and altogether too eulogistic remarks which both your spokesmen have made, for the friendly reception you have given to their remarks, for the portrait you have given me, and for the address, and (as if this were not sufficient) also for the very handsome personal present which you have given to my wife. Now, if you should think I have an easy task, you have forgotten (I am afraid) the state of my feelings at the present moment, and all that this evening conveys to me, extending over a period of fifty years of business, and over an association of a similar period with many of you personally. No one is more conscious than I am of my shortcomings, and the numerous mistakes I have made in the past. All I modestly claim is that when I realised my increasing responsibilities I endeavoured to carry out my duties fairly and reasonably. (Applause.) It was not always easy, and I know I frequently failed, but it seems to me that you have this evening determined to overlook my shortcomings, for you are testifying in no measured manner your goodwill and wishes to my wife and myself.

I started in business earlier than is usual owing to a serious illness which I had as a lad, and I was not considered strong enough to be sent away to school again. I was put under a private tutor, and I can only imagine that the attractions of Midland Place were greater than those of the tutor. However, I gradually drifted down there, and, at first, put in half-days. I can remember on starting entering up the paper ledger. I was paid 15s. per week for that, but I am certain I never earned it. (Laughter.) Fortunately for me, I was then putting my feet under my father's mahogany, and all went very well. I went into the works (as is customary) to be taught the technical part of our business, and I have to thank those who were then in charge of the business (your predecessors in most cases) for the very able and efficient way in which they instructed me, and I am not unmindful of the assistance I have received since those days,

or the continued support and backing which you have also given to me, and for which I thank you. If I have attained any manner of success, I attribute it very largely to the teaching I then had, and (as I have said) to the continual support and good will which you have all given me during so long a period.

Now, you have thought fit to make this occasion a very notable one, one which neither my wife nor I will forget, but what I wish you to realise is this, that whereas it might be expected that anyone in my position would attain his jubilee (given health and reasonable attention to business), it is a very different thing, and a much more difficult thing, for an ordinary employe to do so. He has no claims, hereditary or otherwise, on the proprietors of the business, such as I had. He is liable to all sorts of outside influences, any one of which, even if applied unfairly, was sufficient to break an otherwise long career in the House, and, therefore, I do wish you to realise that what I have achieved is a small matter compared with what so many others in our business have also achieved.

Now, in spite of these difficulties, and in spite of the fact that they had to build up their goodwill with the House, by their daily efforts, year in and year out, for the whole of that period, and to be successful during the whole of that time, no less than twenty-two of our employes have already attained their jubilee. (Loud applause.) Five others attain it this year, and seventeen others have more than 40 years' service to their credit—some of whom are exceedingly near to the fiftieth year limit. (Applause.) Those who served longest in the past were: Joseph Whitehall, or "Joe" as he was generally called, served 64 years. A. Harrison put in 58 years, and the son has already put in 48: a grand total of 106 years for the two. (Applause.) Now we come to my old friend, C. Carter, who originally came as our first timekeeper, and then took up the important position of control of the paper warehouse, who has been with us 58 years; J. Evans, 57 years; W. Bilson, 56 years; and W. Thaw, 55 years. Then we come to A. Leeson, 55 years, and Mrs. Brindley, 54 years. Now, the others who have done fifty years and over—some of whom are still with us—are: J. Stretton, T. Hemsley, E. Foster, Ed. Graves, A. Hutchinson, E. Eaton, T. Lucas, C. Smith, J. R. Francis, H. Pearson, J. Ling, F. Tunnicliff, W. Hodgkinson, and W. Lyon.

My grandfather, the originator of the business, served 51 years as apprentice, journeyman, and owner. His eldest son, Sir Henry Bemrose, 67 years. That included the latter years when he was chairman of the company, which position he retained till his death; and my father, Wm. Bemrose, jun., put in 59 years, again including the time when he was only acting as director. I put it to you, is there any house, do you think, which can show a better record? On the other side there are no less than ten families who have each given a continuous service through three generations; in one case—the Hunton family—the father, son, two daughters, and grandson were serving at one and the same time. (Applause.)

May I conclude by most heartily and sincerely thanking you on behalf of my wife and myself for this further expression of goodwill and good wishes which you have made to us to-night? I want you to accept our simple "Thank you" as conveying all that a more eloquent man could possibly say; but, say what he might, he could not convey to you our feelings this night. We thank you. (Loud applause.)

Brig.-General Bemrose then presented framed acknowledgments of long service, accompanied by cheques, to the following: Mrs. Brindley, Frederick W. Cooper, William H. Harrison, Arthur Stott, Annie Mee, and Miss Francis on retirement after 48 years' service. Messrs. T. W. Bilson, E. J. Graves, E. Eaton, C. A. Carter, T. Lucas, C. Smith, H. Pearson, J. A. Ling, F. Tunnicliffe, W. Hodgkinson, and W. Lyon, who had previously completed 50 years' service, received framed acknowledgments.

Lanston Monotype Corporation

At the seventeenth annual general meeting of the Lanston Monotype Corporation, Lord Askwith, K.C.B., K.C. (acting chairman), said that up to September 30 they had in England a reduction in sales of about 7 per cent., but that was considerably counteracted by increased sales upon the Continent, particularly in Germany, and also in the Colonies. Since September—and he gave them that as a reason why he confidently suggested that the dividend recommended should be paid—the spurt had been good, and they had been selling a considerable number of machines. Their works were now fully occupied, and he would foreshadow with more confidence than he had done for some years that the present spurt in their industry indicated an improvement in trade. Their works had been improved, and they had put down an engine house and a generator. They had made certain improvements in machines, some of which by a comparatively early date would be incorporated, and they had also produced some very remarkable and beautiful faces of type, based on some of the best examples of the fifteenth and sixteenth centuries. In accordance with the statement at their last meeting, they had formed small subsidiary companies in South Africa and in Germany, the shares of which were entirely held by that company, while they had continued to maintain close co-operation with their colleagues in America. He had mentioned that they had sold more machines in Germany. Of course, during the war they were precluded from selling any machines or any parts of machines in that country, and certain people in Germany, in view of these circumstances, took upon themselves to infringe the company's patents. Those people had been proceeded against and a number of actions had been fought and won by the company, and there were certain others which they hoped to win. This would prevent a continued infringement taking place, and he thought, altogether, that the German printers were on their side.

Passed Away

During February many well-known figures in the printing trade passed beyond: Mr. F. S. Barnett, of Guildford; Mr. J. E. Penzer, Birmingham (who spent all his life with Messrs. Uptons, Ltd.); Mr. Thos. Grime, Blackpool; Mr. Henry Armitage (director of Messrs. Jowett & Lowry), Leeds; Mr. J. Howe, Gateshead.

The Federation President Honoured at Leicester

PROPHETS are sometimes honoured in their own countries. Mr. W. B. Wykes, whose year of work as President of the Federation of Master Printers of Great Britain and Ireland is drawing to a close, has done splendid service to the trade. His colleagues, both in Leicester and the Midland Alliance, have never been unmindful of his work as their representative, nor have they been slow to recognise his holding of the highest dignity the printing trade can confer. The annual dinner of the Leicester Master Printers' Association this year served the delightful service of being complimentary to Mr. Wykes. Excellent arrangements were made by the local secretary, Mr. E. Harold Nickson. In the unavoidable absence of the Mayor of Leicester, Mr. Councillor J. M. Hubbard, J.P., received the guests in the Oriental Hall, and afterwards remained to dinner.

Mr. Alfred Lowe (President of the local Association) presided, and was supported by the Deputy Mayor, Alderman Sir William Waterlow, Councillor W. B. Wykes, Mr. H. G. Clarke (Leamington, President of the Midland Alliance), Mr. A. E. Goodwin (Secretary of the Federation), Mr. Dudley Forman (Nottingham), Brig.-General Bemrose (Derby), Mr. D. R. King (Secretary, Midland Alliance), Mr. J. Plant (Principal of Leicester College of Arts and Crafts), Mr. H. S. Bates (West Bromwich), Mr. Lemuel Bell, Mr. Harry Weston, Mr. J. H. Pochin, Mr. Lawrence, and Mr. Owen-Jones (editor of THE CAXTON MAGAZINE). There was a large attendance of members of the Leicester Association.

The toast of "The Leicester Master Printers' Association" was proposed by the Deputy-Mayor, Councillor J. M. Hubbard, J.P., who at once linked himself up with the printers assembled there by the connection between the craft and the Arts and Crafts College. He also acknowledged how the printing trade had contributed to the City Council by sending many able representatives, including Mr. Wykes. He had been told that the printing trade in Leicester ranked higher than in any other town in the country, both for quality and price. (Laughter.) He looked upon their trade as the handmaid of business. The city of Leicester was fortunate in having five great industries which had enjoyed prosperity when many other industries had been depressed—hosiery, shoes, printing, engineering and clothing. He expressed the hope that the printing trade would continue to flourish, and be commensurate with the obvious prosperity of the gentlemen assembled at those tables.

Mr. Alfred Lowe, the president, responded, and paid special tribute to the energy and ability of Mr. Wykes, the Federation President.

"The Federation of Master Printers and the Midland Master Printers' Alliance" was proposed by Mr. Harry Weston (George Gibbons & Co.). He paid tribute to the number of excellent men who served the Alliance in the presidential chair, and to Mr. King, the most tactful and competent Alliance Secretary in the provinces. He was sure they all appreciated the work of the Federation, how it had produced order out of chaos in the trade, and how willing their service was to every member. They were proud of their president, and it was nice to think that he had for so many years represented their Alliance on the Federation Council, and good to know that he had so well upheld the high traditions of the office. Mr. Wykes was a very live wire on their City Council; indeed, his voltage was so high that they had had to put him on the Water Committee to cool him down.

The President of the Federation, Mr. Wykes, in reply, said there had been a time in the history of the Association when members were not so friendly disposed to each other as their presence and spirit indicated they were that evening. Had it not been for the loyal support which he himself had received from every member of the Association, and the considerate support of Mr. Payne, his partner, it would have been impossible for him to have attempted the work for the Federation to which reference had been made. Mr. Wykes then gave an interesting account of the many and varied duties which he had been called upon to discharge, and of his travels in England, Scotland, Ireland and Wales, and made gracious acknowledgment that on every occasion he had been received with the utmost cordiality and friendliness. Referring to the latest venture of the Federation, collective advertising, he expressed his utmost confidence that they would all reap the benefit of this scheme by an increased demand for printing throughout the trade in general. Mr. Wykes also dealt with the vital matter of shortage of apprentices, and urged upon all printers a serious consideration of this question and the supplying to the Federation of exact statistical data on which they could proceed to get some increase to secure a supply of skilled labour in the future. He also paid a very gracious tribute to Mr. A. E. Goodwin and his headquarters staff, without whom no president could carry through his work.

Mr. H. G. Clark, President of the Midland Alliance, also responded to this toast, claiming the Midland as the premier alliance because long before alliances were formally constituted the Midlanders had done their works in groups, had conducted negotiations with the unions, and generally prepared themselves for the federating of the associations of the trade.

The toast of "The Guests" was proposed by Mr. Lemuel Bell and responded to by Sir William Waterlow. Sir William had been asked before coming to give the gathering some of his reminiscences of the trade. He reminded those present that he had come into printing comparatively recently. He had been trained as a lawyer, and for the greater part of his life had practised law. His first active interest in the politics of the trade was in 1910. There was then the possibility of some trouble with the workers, and a fiery resolution had been moved and carried pledging printers to take some very drastic action. He was asked what he proposed to do, and he replied, "Nothing at all." His opinion was that the greater part of the printers of the country also would do nothing, and nothing was done. The moral of that little incident was that when delegates attended London

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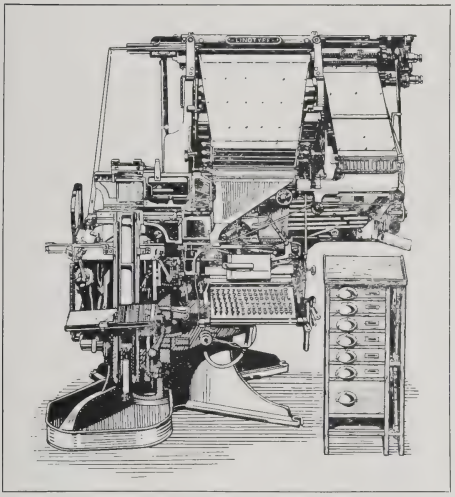

The machine as illustrated has a range of 5 to 36 point, and all faces can be set from the single standard keyboard. Mould and magazine changes can be effected in a few seconds. This model can be installed with three magazines only, and the side magazine section for extra large display added to the machine at a later date.

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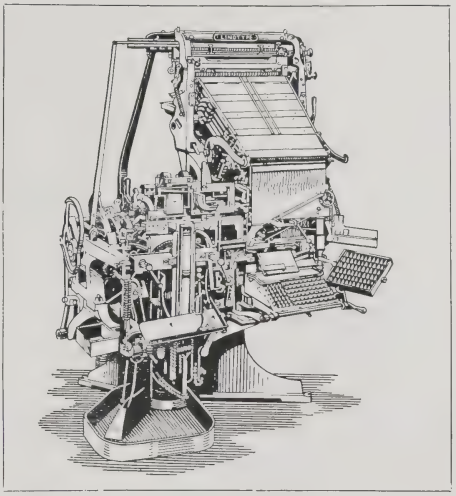

This model is recommended to those printers whose work requires a wide variety of type faces (roman, italic and display) in one and the same line. The standard magazine equipment provides four full size magazines, any adjacent two of which can be used together. Ordinary composition can be set on this Machine as readily as on Model 4.

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meetings they should never be afraid to express their views. Sir William also had some interesting remembrances of the origin of the Costing Committee in 1911. At that time there was a resolution to increase the cost of printing, and out of that resolution came the suggestion that they should in the first instance make some drastic attempt to ascertain their exact costs. In 1914 he went with a number of other printers to Germany, and from Leipzic, on behalf of their Federation, a telegram had been sent to the German Emperor. On July 16 a reply came saying that His Majesty thanked them for their kind greeting, and in reply would say he looked upon them as comrades and friends. Seeing that within a fortnight they were at war with each other, the moral of that was that things were not always what they seemed. Any success he had achieved as a printer he owed to the work he had done for the Federation, and he was quite sure that the experience Mr. Wykes had gained would react in Leicester. If he could start his career over again, he would be an accountant as the best preparatory training for printing. A sound grounding in accountancy was one of the best assets in business. That was evidenced in the work Mr. Goodwin had done both as costing expert and as secretary of the Federation.

Brig.-Gen. Bemrose also replied to this toast, making special reference to the work of the Joint Industrial Council.

Mr. J. H. Pochin, the Vice-President of the Leicester Master Printers' Association, proposed the toast of "The Chairman" in a very witty speech, and when Mr. Lowe had responded the gathering came to an end.

Songs were sung by Miss Dorothy Hammond and Mr. S. Wilford, greatly adding to the delight of a very pleasant evening.

Design Applied to Printing

A Lecture by Mr. Joseph Thorp

A SERIES of lectures at the London School of Economics is being given on Wednesday afternoons on the principles of design applied to architecture, furniture, textiles, pottery and kindred subjects. These lectures have been arranged by the Design and Industries Association, and the lecturers are well-known authorities on the vairous subjects. Mr. Thorp is well known for the excellent work that he has done in influencing the improvement of commercial printing, and is the author of "Printing for Business," a book treating the subject on quite original lines.

Mr. Thorp's lecture was full of good points, and we give an impression of some of his views. We understand that the series of lectures will be published later in book form, when we shall have occasion to refer to this subject again:—

The Design and Industries Association had an important message. What it wanted to say, fundamentally, was the formula they applied as a principle in design was very strongly expressed as "fitness for purpose." They could not apply rules, but, generally speaking, things made for use should be made to do their job first of all, and it carried one through a tremendous amount of difficulties and troubles of designing to remember that what after all looked like a positive was perhaps a negative. The artist should not include anything which militated against the purpose for which the design was made. It was obvious that there was practically no weapon, or vessel, or engine that had not its fundamental form, and when people departed from the basic shape indicated by the construction it generally ended in vulgarity. The hammer was a tool designed for the purpose for which it would be used—the leather-worker's hammer, the carpenter's hammer—every one of them properly made for their respective jobs, and no pattern had been added or material cut out of the wrong places to produce a so-called decorative effect. They were a very jolly set of things to see. The admirable late Professor Herkomer, when motor-cars first came into being, thought it would be splendid to see sailing about our streets cars decorated with birds and wings. They could imagine what London would look like if, instead of letting the engineer work out the form of the motor according to the principle of stream line, they had had a few tame artists on the job and had swans and armadilloes floating about. It would have been a place fit for monkeys!

In general, as to principle of design, ornament was not a thing to be stuck on or added, but should be a thing which grew out of the fundamental subject. A good example was the Tower Bridge, which was really an engineer's bridge, built by engineers on sound engineering principles, but it was decorated "architecturally," and there was not a worse bridge outside christendom. It ought to be removed! The Forth Bridge, on the other hand, looked right, and would always look right, because it did its job. In the case of Waterloo Bridge, if it were re-built, probably it would be a metal bridge, and if it attempted to look like a stone bridge it would be another monstrosity.

Passing from the general aspects of printing, the controlling principle must be the legibility. The job of the printed word was to be read. Although William Morris did not always place legibility first, he did more by example and energy and vitality in getting the little way ahead we have from what we were doing thirty years ago. They would consider simple letterpress printing—printing in one colour on white paper, still keeping to their subject of design and the principles of design. They obviously must begin with the design of the unit—the letter—and see that it fits in with the principle annunciated. Then obviously they would pass to the designing of the grouping of the letters, to the paragraphs and page, or panel and frame, where type was to be used in sectional or advertising form. Coming to the letter, individually, it had to be remembered that it was primarily a code or signal. With the letter a sign was signalled to the reader. The letter "d" being the signal, they could not have everybody making different kinds of "d's." If they did they would never get any further with literature. The matter hardened into a definite, clearly-cut code. Whatever freedom the artist or designer might have, it was a freedom within extremely narrow limits. It was absolutely vital that there should be no interference with the

established shapes. If the idea of an alphabet as a code was accepted, it would be realised that it was not necessarily an ideally perfect alphabet. Words were read by shapes, and people paused when they came to long words they were not used to; the child paused even at the short ones. The word "from" was read as a shape, not as "f," "r," "o," "m," put together and then pronounced. The difference between the letters "e" and "o" in lower-case was too slight to be very legible, and he would prefer to see the letter "ɛ" substituted for the "e." But it would be almost impossible to get the change made all over the world. The only great change which had taken place was the change of the old, long "ſ" which would be so nearly like the letter "f." The old "ſ" was in use until towards the end of the eighteenth century, so it had taken three hundred years to change that.

Mr. Thorp then went on to describe various freak letters which had enjoyed a vogue in the past, but were now fortunately dying or dead. There was the clumsy ugly letter which gave for the letter "o" a circle with a minute hole in the middle. Most of the letters were unrecognisable. The architect had been another sinner in respect of lettering. He had conceived an "H" whose downward strokes had so converged that it resembled a badly-made "A." A long, straggling, indefinite stroke had stood for the letter "s." Another letter "H" had a dent in the horizontal stroke, which was slightly exaggerated and resembled a horse's bit. Then the tradesman would take a perfectly decent "R" and put horns on the ends of the strokes and take bits out of the sides. This he gilded and covered over with glass. There was still plenty of this left in London, although things were better at Leicester. Embellishment ought to make a thing as beautiful as possible. A poker could be a beautiful thing if properly designed. The decoration should, however, be done on the metal lathe, and design itself. Designing really amounts to a sense of due proportion. There was a parallel between architecture and printing.

Talking of the grouping of the printed matter, Mr. Thorp said that panels on a page, or two panels on two pages facing one another, were invariably arranged with a little more margin at the bottoms of the pages than at the top. Prints and photographs were framed in the same way. If people framed pictures any other way, the thing would appear to be tumbling out of the frame. He gave two reasons for this: In architecture they would think there was something horribly wrong if a house had its lower sections larger than the upper parts. Another reason was that in holding a book, the larger space at the bottom of the printed page could more easily accommodate the thumbs of the reader than a smaller space.

In the design of type, the artist's or craftsman's trouble was to get a type at once legible and with no one letter to stand out above any other letter. It was an exceedingly difficult job. Theoretically, there ought to be one perfect type, and one only. But men were not made like that. The variety of types was extraordinary and really subtle. There were two great families of letters—the old style and the modern or mechanicalised letter. Printing came into the world at the golden age of penmanship. It would have been a very different thing if everybody had been writing the debased stuff afterwards used. The handling of the tool made its own stroke. In the days when printing came into being, writers used the reed pen, and the strokes which would have been made by the pen could be traced in the formation of the letters. The difference between th old and the new was that the moderns thought they would have a perfect letter—perfect parallels, perfect circles, perfect right angles—all mechanical. To most of them that was an absolute decadence. The old style was so much more legible. The modern "s" did not come off the tool so well as the shallow curve. In the case of the letter "Q," the old "Q" had a long tail which was quite a good stroke of the pen. The new one had all sorts of extraordinary twists in place of this tail, but there was, of course, the difficulty of the long outstanding piece in the casting. The buttonhook type of "f" had been introduced by typefounders to avoid kerning.

As a rule, lower-case letters were more legible than upper-case. Lower-case letters could mostly be read with the lower half of them covered up, but this could not be done with upper-case. But they read lower-case about one hundred and twenty times as often as upper-case letters, and were therefore more used to them. He had been trying to get a newspaper to change over to old-style type, but editors wanted to get all they could into the column. Most newspapers' headline and leader type was condensed. It was about time newspapers began to think of the eyes of their readers, and not how much they could get into their column.

The designer of the printed page would recognise the importance of the indented paragraph. It had an extreme importance mentally. Having seen a passage in a book, one remembered where it was by the shape of the paragraph and the position of the paragraph on the page. It was therefore wrong not to indent the paragraphs in order to make the page look a solid unbroken mass. The placing of the two panels of printed matter on two pages of a book was usually arranged so that the spaces at the top were equal on the two pages, the sides a little wider than the top, the middle of the book being the same width as the sides, having allowed for the pinch of the bookbinder. The bottoms of the page should be a little wider still. He had no patience with the so-called edition de luxe, for which one paid three guineas or so for the same type set on larger pieces of paper, looking very forlorn and hopeless, with enormous margins. On the other hand, if the text went right to the edge of the page, they would find they fixed their eyes on the thing nearest to the eyes, which was most tiring to the eye muscles. It was for the artist to say what width the margins should be. They could be overdone or underdone.

The principles of design were principles of common sense. Fitness for purpose, combined with pleasantness in use and architectural principles of parallel were the main points.

Mr. R. B. Fishenden is the special lecturer for March in connection with the scheme of lectures arranged by the Central London Association. His subject is "Methods and Machines in Photogravure." There is certain to be very wide interest in what Mr. Fishenden has to say. This function is to be held on Wednesday, March 4, at 6.30, at Stationers' Hall.

The Principles of Colour:

With Special Reference to their Applications to Printing

By A. E. BAWTREE, F.R.P.S.

IN the dim and distant past of modern scientific development, possibly some centuries ago, someone drew a diagram representing a beam of white light as a line entering a triangle which stood for a prism. On the other side of this triangle emerged a fan of seven lines, whose extremities were tipped with the letters V, I, B, G, Y, O, and R. The other end of the scale of time shows the present-day colour diagram. This consists of a curved line upon paper ruled with little squares, the margins of the paper being adorned with figures to represent wavelengths and percentages of absorption. Those two forms of illustration cover all that science has had to offer the student of colour. Even advanced scientific examinations call for nothing more than a stereotyped conventional, parrot-like knowledge of the meaning of these figures. As a result, science has nothing to offer the practical man in the way of useful colour knowledge, and the latter is firmly rooted in his belief that theory and practice are entirely different things, and that there is one law for coloured light and another for pigments.

While the simple but unintelligent system of selecting teachers and professors by means of examination results does not wholly fail when purely book subjects are concerned, such a conventional and unimaginative method, when applied to colour, has resulted in the state of affairs indicated, in which convention has carried education completely out of touch with the practical needs of the time. It is proposed in this article to deal with the subject of colour right from elementary principles, and the reader is asked to set aside whatever conventional teaching he has received upon the subject. He has found it useless in his practical work, and it will only cumber and confuse him if he tries to reconcile it with the new line of thought which is here to be unfolded.

In Fig. 1 is given a boldly-drawn clock face, and

Fig. 1.

it will assist the reader if he will, with crayons, water-colours or other means, tint the twelve sections appropriately. An excellent plan is to paste down little sections, cut from flat specimen sheets of printing inks. The colour circle so prepared is the basis upon which an intelligent understanding of the laws of colour can be obtained. The only other apparatus required for carrying out the experiments described consists of two boxes, one covered in front with a sheet of white paper, and the other closed except for an opening in the front which can be covered with pieces of suitably-coloured glass or gelatine. A small source of light, such as a candle, can, when required, be placed in the former, while a strong light such as an acety-

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lene cycle lamp can be placed in the latter. The boxes are placed face to face and some distance apart in a darkened room. The colour disc should be mounted upon opaque card and cut out.

In the first experiment, the colour disc is hung in the centre of the white paper front of box No. 1, and illuminated with bright white light from box No. 2. It, of course, appears to glow with all the brightness of its various hues. Next the front light is cut off and the illuminant in box No. 1 put in place; the disc now appears as solid black upon a white ground. These operations demonstrate the first law of colour, namely, that a substance does not possess colour as an independent power, but only can give the impression of colour when light falls upon it.

Variously coloured lights are next thrown upon the disc by covering the hole in box No. 2 with suitable media. As performed in lecture demonstrations, the writer used photographic light filters for this purpose. When the disc is illuminated only by violet light, the top appears as light as the surrounding white paper, the bottom as black as the enclosing circle, and the intermediate sections are of degrees of darkness graduating from top to bottom. The white background shows as the lightest part visible, while the black margin appears just as black as in white light. Finally it will be observed that, no matter what be the colour of a section, every one appears violet in hue; the only difference is as to the brightness of this violet.

If the violet light is next changed to green light, it will be seen that the green section on the right is the lightest part, while the red on the left is practically black, the intermediate sections ranging in density from the one to the other. The white background appears the lightest part of the scene, quite as light indeed as the green section, while the border ring containing the clock figures looks quite black. No part of the whole appears to be of any other colour than green, although the sections appear of bright and varied hues when seen by white light.

In yellow light the bottom of the circle is light and the top black. Similar effects to those already described are apparent, including that in which nothing appears to be of any other colour than yellow.

Finally, under red light a similar set of phenomena is witnessed. It is a pretty experiment to mount the four coloured glasses on a wheel, so that each can in turn be rapidly brought into place over the source of white light. When the wheel is rotated, the colour circle appears to revolve, since each coloured glass makes its own coloured section of the disc the brightest and the opposite one the darkest. The black and white border to the disc remains at rest, so that only the colour-wedged disc within it seems to undergo movement.

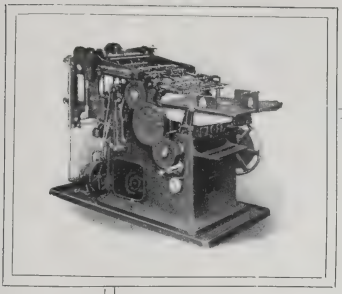
These experiments convey the principles of the next laws of colour. Since the black border appeared to reflect no colour under any of the changes, it is clear that black is something which *destroys* all coloured light of whatever hue. Since the white background appeared as bright as each of the four colour sections—violet, green, yellow and red—when each is lighted by rays of its own colour, it follows that white paper reflects all coloured lights fully and equally.

It was observed that, with each coloured light falling upon the disc, no matter what the sections of the disc appeared like in white light, none of the sections appeared of any other hue than that of the illuminating light. This teaches the law that no substance can appear of any other colour than such as is contained in the light falling upon it.

Taking this law in conjunction with the previous one, which showed that white material reflects all colours equally, the law is derived that white light contains lights of all colours. The student politely accepts the evidence of the spectrum diagram that white light is composed of all colours, but it carries him no further. The foregoing experiments actually demonstrate the law to him in a way which he cannot forget, and one which is of real assistance to the practical user of pigments, dyes or fabrics.

While the sections violet, green, yellow and red each appeared fully bright when its own coloured light fell upon it, and while the diametrically opposite section appeared practically black, the intermediate sections showed in various degrees of dullness, brighter near the light section and darker farther from it. Generalising, it appears that some coloured materials neither completely destroy the particular light falling upon them nor completely reflect it, but destroy part and reflect part. Upon closer study, it is seen that the rule is that a material completely reflects light of its own colour; the two sections, one on each side of it, reflect much but destroy some; the sections next distant reflect less and destroy much; while the sections on the diameter at right angles to the section and all those beyond this diameter destroy practically all the light. For example, with a violet illuminant, XII. appears fully bright, XI. and I. somewhat less so, X. and II. decidedly dull, and all sections onwards from III. to IX. look black. If the twelve sections of the colour circle and the foregoing laws can be committed to memory, the reader will have gone far towards an intelligent understanding of the principles of colour, and, with the further explanations which follow, should be able to foretell just what will happen when any combination of coloured materials or of materials and lights is contemplated.

The simple pure coloured lights which have so far been considered are what are known as monochromatic. The next question is: What happens when the disc is lighted by two colours at once? Take, in the first place, violet and red. Under violet light the whole lower half of the disc will appear black. Under red light the whole right-hand side will totally destroy the light. Sections III. to VI. will therefore be quite dark under the mixed rays. Sections XII to II. will look just the same as when lighted by violet light only, and Sections VII. to IX. as when lighted by red light only. It will be found by observation that sections IX., X., XI., and XII. look just the same when illuminated by mixed violet and red light as they do when lighted by white light. From this it is clear that magenta is the result of the simultaneous reflection of violet and red, and that so also is purple. Seeing that, from earlier experiments, magenta reflects much red, but only a little violet, and that purple reflects much violet but less red, the general rule is deduced that the intermediate sections between the four polar portions of the circle, viz., violet, green, yellow and red, are composed of light of the two poles, one on each side of the section under consideration, and that the section reflects more of the light of the pole to which it is nearer. Thus citron reflects a mixture of green and yellow light, the quantity of green



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predominating, while blue reflects mixed violet and green light, the violet in this case being in excess.

Suppose next that the circle be lighted by light of two mixed colours which are opposite in the circle instead of being, as in the previous experiments, of the hues of two adjacent poles. Consider illumination by violet and yellow light simultaneously. In violet light the whole upper half of the circle is visible, strongly at XII. down to feebly at IX. and III. In yellow light the whole lower half is apparent, most at VI., fading off to dimness at IX. and III. Thus with these lights mixed, the whole circle is visible, clearly at top and bottom and dimly at the two sides. The effect is in fact that of a kind of colourless light, scarcely distinguishable from white. If a screen be made up of small portions of transparent red and violet material and the mixed light which it transmits be thrown upon a white screen, the screen will appear magenta in corroboration of the foregoing considerations. If such a screen be prepared with violet and yellow sections, it will be found experimentally to yield practically a white. Both by theory and practice it can be shown that any two coloured lights which are diametrically opposite to one another in the circle yield this appearance of white light. This is what is meant when it is said that two colours are " complimentary."

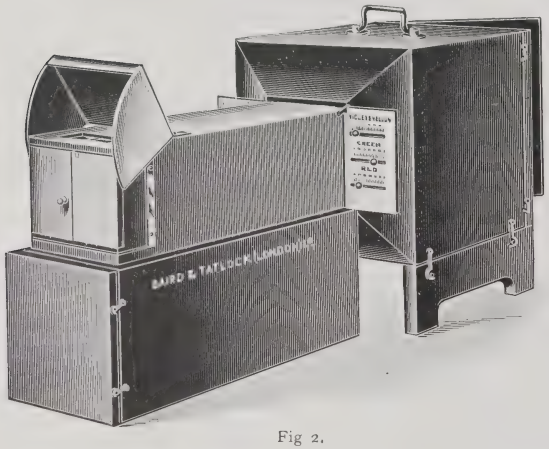

Fig 2.

It will be argued that so far the experiments have concerned only coloured light, and that it is absurd to say that violet and yellow make white; in fact, the old idea of one law for light and another for pigments is confirmed. To co-relate pigments and light it will be necessary to consider what takes place in a mixture, such as a printing ink or paint. Mixtures may be of three kinds: Particles which are quite opaque may compose an ink, being held together by a colourless medium. An example of this is lemon chrome and zinc white in varnish. Next the ink may consist of a mixture of two transparent varnishes. Prussian blue or bronze blue forms with the varnish a transparent fluid. The action of many lakes on the varnish is similar. Lastly, inks or paints may be, and indeed as a rule are, compounded of ingredients of both kinds. If an ink is a mixture of two opaque pigments, whenever a grain of one kind is upon the top of one of the other, the latter is quite hidden. If all the zinc particles were upon all the chrome ones, the effect would be as white as if there were no chrome ones there at all. In actual use, some zinc particles will be concealing some chrome ones, and *vice versa*, the net result being that the eye receives mixed white light from the zinc and yellow light from the chrome. In mixtures of pigments, when all ingredients are opaque, the laws which apply to coloured light mixtures will be truly followed. In such a mixture of red and opaque violet, the result will be a true magenta, while in one of opaque yellow and opaque violet a dirty white will result. It will be white because violet and yellow lights mixed make white; it will be dirty since all the particles destroy some part of the white light falling upon them, and so the compound destroys some of the total white light. The laws which govern light passing through a transparent substance are exactly the same as those concerning opaque bodies lighted by coloured light. Thus transparent magenta glass transmits violet and red light only while citron glass transmits much green and less yellow. A green ink, composed of particles of opaque chrome embedded in a transparent bronze blue varnish, owes its hue to mutual destruction. The blue varnish can transmit violet and green light, but no yellow. The lemon chrome particles can reflect green and yellow light, but no violet. All the white light which reaches these particles through the covering film of blue is robbed by the blue of its yellow rays. The violet rays which pass through the blue film are destroyed by the lemon particles. On the other hand, the green light which the blue film is able to transmit is reflected back again through the film by the lemon particles which are able to reflect green. Thus the only colour which is able to enter the film and come out again undestroyed is green. If two transparent varnishes of, say, lemon and blue had been used, the resulting colour would have been green, for just the same reason, namely, the blue can only transmit violet and green, and the lemon only green and yellow. The blue destroys all yellow light which might pass through the lemon, while the lemon film destroys all the violet light which might pass through the blue. The result is that the only colour which can pass through both the blue and the lemon is the green. A great deal of the confusion which exists upon these points is due to the mistake of calling pigments " colours." When chromate of lead is mixed with prussiate of iron, one is not mixing yellow and blue, but is partially destroying the chromate of lead's power of reflecting light. Whenever one or more of the pigments in a mixture is transparent, the colours are not being mixed, but one is being partly destroyed by the other.

In the following combinations of pigments, one or both of the ingredients is presumed to be transparent. As already stated, if both were opaque the effects would be identical with those obtained by the admixture of coloured lights. If a violet pigment be mixed with a yellow one, the result is a black because each destroys the other. Similarly, any two pigments whose colours are diametrically opposite in the colour circle are mutually destructive, and black is the result. If the two pigments are a little to one side of a diameter, they will yield a dark shade of the colour which is between them. Thus the dark-red safe-light used for rapid photographic plates is made by

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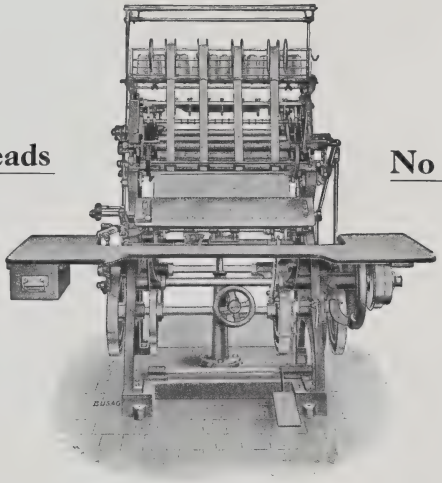

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placing a piece of purple glass upon a piece of saffron glass. In like manner a mixture of magenta and azure pigments produces dark violet, purple and blue pigments yield a brighter violet, purple and green yield blue, and citron and orange yield yellow. If, instead of pigments, coloured lights of these hues had been added together, the mixture would have been whitish on account of the extent to which the hues were opposite one another, but, as with pigments, would have been tinted with the colour which lay between them. Thus saffron and purple light yield very light red, that is, "crushed strawberry." Magenta and azure lights mixed yield pale violet, that is, lavender; while orange and citron lights blended give pale yellow, that is, straw colour.

Apart from hue, colour possesses two other characteristics, namely, intensity and purity. In-

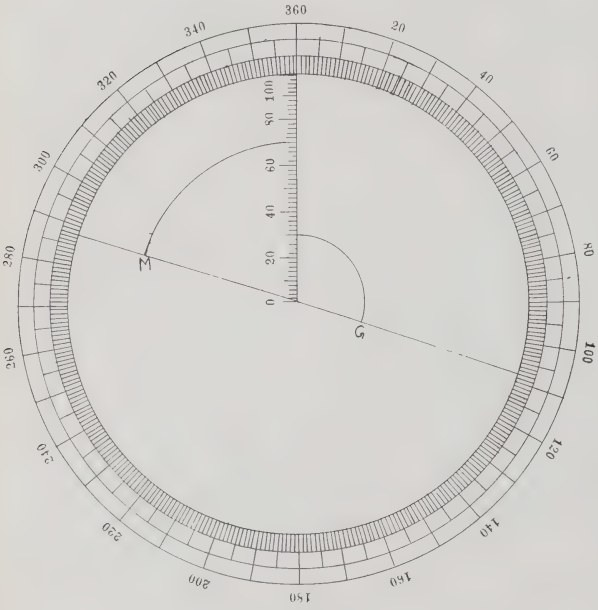


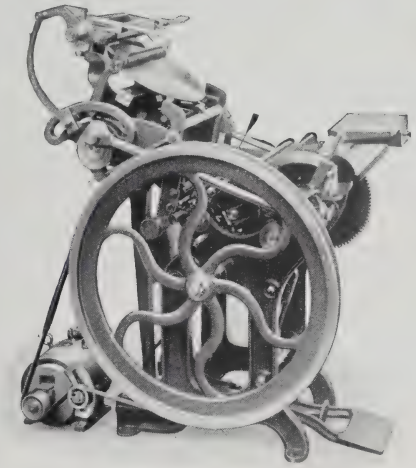
Fig. 3.

tensity is the measure of the colour reflected or transmitted by a pigment compared to the quantity present in the light falling upon it. Thus a chocolate may be of hue IX., but, if it only reflects 10 per cent. of the red contained in the white light which illuminates it, it is said to be a red of 10 per cent. intensity. Purity is the relation of the amount of the colour which a substance reflects or transmits to the amount of white light which it also gives out. Thus a lavender may be of hue XII., but, if it reflects in addition to the violet light 70 per cent. of the white light which falls upon it, it is said to be of only 30 per cent. purity. Finally, some of the white light falling upon a pigment may be partly destroyed, leaving only light of one colour, thus giving the material its hue. A second portion of the white light may be totally destroyed, causing a lack of intensity, while a third portion of the white light may be totally reflected, causing the colour to lack purity. The grey-green paint seen on some motor-cars, for example, may be of hue III., intensity 30 per cent., and purity 50 per cent. In this case 50 per cent. of the white light is reflected unaltered, 20 per cent. is totally destroyed, while 30 per cent. has all colours destroyed in it except that of hue III.

While the foregoing considerations carry one a long way in understanding the principles of colour, enabling one to foreshadow the effect of mixing pigments or superimposing printings, the value of the information is greatly enhanced if it is possible to measure a colour, give it its correct place in the colour circle, and also determine its intensity and purity. This need has been met with the colourmeter, shown in Fig. 2. A square box is divided by a vertical partition, and at one end is crossed by a stage. On one side of this stage is a shutter which more or less opens one of the divisions of the box. The other side of the stage is provided with three shutters, which admit to that side of the box light through three coloured glasses. The bottom one is red, the middle one green, while the upper one is removable and can be either violet or yellow. With the former in position colours in the upper half of the circle are matched, while with the latter measurements of colours of the lower half of the circle are made. In use these mixed coloured lights are thrown upon a white opal glass screen, while the white light coming through the other side of the box is allowed to fall upon the sample under examination. The one shutter on the white light side and the three on the other side are all calibrated into one hundred divisions, and in practice it is found possible to detect differences in colour amounting to one-half a division. By means of simple formulæ the position of the hue of a colour in the circle and also the measure of its intensity and purity are obtained from the scale readings. The hue is expressed, not in the twelve hours of the diagram of Fig. 1, but in 360 degrees, as in Fig. 3. It is possible to detect a difference of one degree in this circle in the hues of two samples, and with a little practice one can give quite a close approximation to the position of a sample in the circle before taking the colourmeter tests. Intensity is visualised along a radius, divided into 100 parts, imagining the colour circle to be fully brilliant round the circumference, shading off to black in the centre. Similarly purity is brought to mind by supposing the circle to be brilliant round the circumference, fading off to white in the centre.

Colour blindness is a factor which should be appreciated by the printer, for it has a bearing upon customers' requirements more often than is suspected. Its effect is that one portion of the colour circle XX. does not appear fully brilliant to the observer so afflicted. It is said that one person in ten suffers from this defect to some extent. Seeing that browns are reds of low intensity, a person who is red-colour-blind will see the left-hand side of the circle as shades of brown. If his perception of violet is normal, magenta will appear as a somewhat deep purple. If one meets a lady wearing a scarlet hat trimmed with magenta ribbon, it is quite possible that she herself sees in the glass a pleasing combination of deep brown, trimmed with purple. Colour blindness may occur in any portion of the circle, and its possibility in workers or customers should never be lost sight of.

The accepted idea of the various processes of colour photography are based upon the theory of such a colour circle as is represented in Fig. 4.



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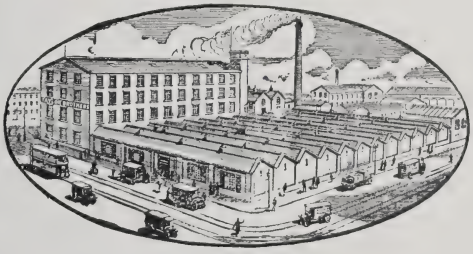

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It is supposed there are three primary colours—violet, green and red—which are accordingly placed equidistant at 0, 120, and 240 degrees. It is appreciated that violet and red make magenta, which is accordingly placed between them, and that for similar reasons blue comes between violet and green. It has always been supposed that green and red made yellow, which accounts for its 180 position in the circle.

Now a print from an ordinary photographic negative of a subject taken in white light represents as black all the parts of the subject which destroy the white light, and as greys all those parts which partially destroy this light. If the whole subject were illuminated by violet light, or, what comes to the same thing, if a violet glass "filter" be placed over the camera lens, a print from a negative taken under these conditions will show as black all the parts of the subject which destroy violet light, and as greys those parts which partially do so. Now the colour which most perfectly destroys violet light is yellow. Therefore, the image taken through the violet filter is printed

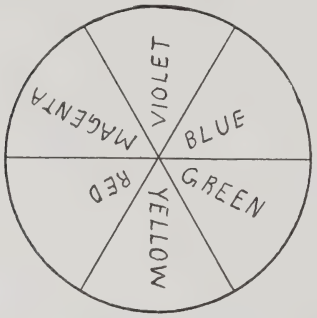

Fig. 4.

in that coloured ink. According to the colour circle of Fig. 4, the complimentary colour to red is blue, and to green is magenta. By the same reasoning, therefore, the print from the negative taken through the red filter is printed in blue, and that taken through the green filter is printed in magenta. Yellow, magenta and blue portions of the subject are thus accounted for. Consider a violet portion. By the early experiments which have been described, it is found that violet destroys nearly all the green light and red light. In the combined print, therefore, this violet portion of the subject will appear both in magenta and blue. Now magenta reflects red and violet only, while blue reflects violet and green only. The magenta destroys the green of the blue, while the blue destroys the red of the magenta; the resulting colour is the violet, which is common to the two. By similar reasoning, greens and reds are obtained in the photographic reproductions.

Now experiments have shown that, while the purer are the red and violet lights which are blended in the colourmeter or other mixing device, the richer is the resultant magenta, and while the purer are the violet and green, the richer is the resultant blue; when the purity of the green and red is increased, the yellow which they yield becomes paler until, when quite pure coloured lights are used, the result is white, and not yellow at all. This proves two points: first, that red and green must be complementary and placed opposite one another in the colour circle; and, secondly, that yellow is itself a primary colour, just as much as are violet, green, and red. The true colour circle is thus as shown in Fig. 5. It has been shown that each working of a colour printing process must be pulled in ink of a hue which is complementary to that of the light filter used for taking the negative. The new colour circle shows that the present inks are not so, and it is possible to see how this upsets the reproduction. The green filter yields an image which is too strong towards the yellows and too feeble towards the blues; hence the well-known veiling of the greens of a reproduction with magenta unless very vigorously reduced by fine etching, and hence also a lack of strength in the violets. The red filter would similarly throw too much blue into the yellow parts of the picture, but to avoid this a true red filter is not used, but one between orange and red. Even so, this co-operates with the green filter in yielding blues which are too feeble. The printer attempts to overcome the defect by using too strong and too

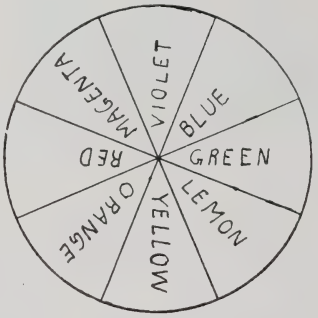

Fig. 5.

violet a blue ink, with the result that he upsets all the other parts of the picture, and has to put it right by skilled hand work.

If one simply took four filters—violet, green, yellow and red—and printed the blocks in the complementary colours—yellow, red, violet and green—the resulting picture would be black and white, because each ink is monochromatic. When any two such inks are superimposed, as has been shown, each completely destroys the light which the other can pass. The result of superimposing or mixing together two printing inks is to destroy all colour which they do not both reflect or transmit. Thus it is essential that the inks chosen must each reflect or transmit two colours. The inks therefore must fall between the poles of the circle, and their hues must be: lemon, orange, magenta and blue. Since it is essential that the filters shall be complementary to the inks, the filters will respectively be magenta, blue, lemon and orange. The exact hues of the filters depend upon the commercial inks available, and the Forrest Printing Ink Co. have standardised the latter. In conformity to these inks, the writer has produced the requisite series of light filters, so that it has been possible to put the theory to the practical test. The first experimental result appears in the present volume of The Process Year Book and in the catalogue of the last exhibition of the Royal Photographic Society. The original was selected

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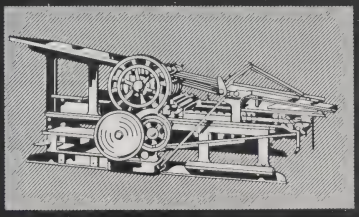

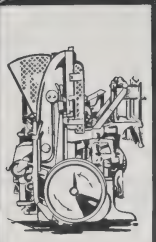

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by a leading firm of colour printers for extreme difficulty, and original and reproduction were hung side by side at the R.P.S. Exhibition and at a recent exhibition at Stationers' Hall, London, when Mr. William Gamble included a favourable reference to the process in his lecture. All who have thus been able to compare original and reproduction have been struck not only with the fidelity, but with an indescribable sensation of reality and naturalness, which is seldom met with in ordinary colour reproductions.

While the four-colour circle solves the theoretical difficulties of the colour ptoto-mechanical printer, this does not mean that it is a simple and perfect cure-all for all colour difficulties. As an analogy, the average wireless loud-speaker manufacturer is not so much concerned with producing an instrument which works perfectly as in making one which is loud and shows a big profit on manufacture. For copying old oil paintings, dark furniture or carpets, and men's clothing, the present three-colour process gives in three printings all the range of colour which is required. Similarly, for picture postcards, Christmas cards and second-class advertisements, where no particular quality is called for, the present method is sufficient. Where, however, the best and brightest effects are desired, particularly for good-class advertisement work, the process offers unmistakeable advantages. It may in some cases purchase this superiority at the expense of a fourth printing, where the inferior work was done in three, but, on the other hand, it will often save in printings, as it will do much of the work which is at present performed in many-colour litho. The process is not confined to typographic block printing; it is equally suitable for litho, offset litho, and photogravure. The methods of fine etching and re-touching are much simpler and more easily learned than in the present three and four-colour processes, which should make the new method particularly desirable in litho and gravure, where the re-touching methods are not so direct as in block making.

NOTE.—A large model of the colour circle, shown in Fig. 1, is used by the writer in his lectures on behalf of the Forrest Printing Ink Co., the sections being filled in with sheets of paper printed in flats of ink supplied by them. To assist readers who would like to study this article to the best advantage, this firm has agreed to put up in packets sets of twelve strips of the required coloured flats, which will be sent free to all readers on application.

Printing Trade Alliance

THE increasing strength of this organisation was referred to at the annual dinner at Anderton's Hotel on February 21, at which Mr. C. F. Tomkin presided, and where Mr. Philip Guedalla was the special guest.

Mr. H. C. Houghton, in submitting the toast of "The Printing Trade Alliance," said their organisation stood for all that was best in trade unionism. The alliance of Capital and Labour—of employer and employe—which it represented was the best form of trade unionism. In the industrial world to-day it had become increasingly manifest that these two great forces were interdependent. The employer of to-day realised more and more that a well-contented workman was one of his greatest assets. When disputes arose, what better form could there be of settling them than by a "round table" conference? That, he considered, was a sane way of settling industrial disputes. Yet in the twentieth century we still had to resort to the barbarous weapons of strikes and lock-outs. A Labour leader had been reported to say that the Labour party could never relinquish the right to strike, as that was their only weapon of defence. They of the Alliance knew better than that; theirs was a weapon forged of mutual respect and esteem, tempered with a desire to live and let live, and with it they could not fail to bring all their disputes to a successful issue.

Mr. Walter W. Cant (secretary of the Alliance), in reply, thought that many of the biggest Labour leaders were to-day thinking in the same way as themselves, and were trying to teach their followers that where there was a tangle of conflicting interests there were also two sides to the question. If those people ever got as far as a round-table conference, the one thing they must have was confidence. There must be confidence on both sides if they wished to have a decision of a permanent value. In the Alliance they had that confidence, not only at the conference table, but day by day in the workshop between employer and employed. They also had it between union officials and members, and it was that personal contact and knowledge of each other that would lead to the real trade unionism, of which the Printing Trade Alliance was the pioneer.

Mr. Philip Guedalla, in responding to the toast of "The Visitors," said the question of real importance to the country was the organisation of industry—the relation of the men and women to the work in which they were engaged. They lived in a much more real world than the past, and he was glad to see that the Alliance was bringing into industry what he might call the League of Nations atmosphere. They had to reconcile human happiness with the invention of machinery, to see that the workers had the fullest and best possible life.

Mr. H. Basil Cahusac, who proposed the toast of "The Open Houses," expressed his approval of the principle of arbitration. Mr. L. Sidders, in acknowledgment, described their organisation as a movement that stood for the spirit of compromise.

AT a whist drive and dance organised by the employes of Messrs. T. Forman & Sons, Nottingham, on Friday, January 23, in aid of the General Hospital, Miss J. Smeeton, who has completed 50 years' service with the firm, was the recipient of presentations from "all ranks." From the firm she received a cheque and clock; the heads of the various departments gave her furs; while gifts were also tendered from the girls of the binding department (of which she was for many years forewoman), and the machinemen. In the absence, through indisposition, of Mr. James Forman, the proceedings were presided over by Mr. D. P. Forman, and the presentations were made by Mrs. James Forman (for the firm), Mr. H. E. Barrow (for the chiefs of departments), and Mr. A. Pike (for the machinemen).

REVIEWS

The Life and Work of William Tindale. By W. B. Cooper. Longmans, Green & Co. 16mo. 54 pp. 3s. 6d.

The connection between the printers of the early 16th century and the Reformation is not usually recognised, although the first English translation of the New Testament was printed during this period. In this little edition an account is given of the wonderful energy and perseverance of William Tindale in translating the Testament, and in his journeys and adventures on the Continent in arranging for the work to be printed. According to this account, the first English Testament was printed in 1525 by Peter Schœffer at Worms; the first edition was an octavo, 3,000 copies; a quarto bearing the same date appeared a little later, also 3,000 copies. In less than five years, six editions appeared, probably fifteen thousand copies in all, which were smuggled into England. Owing to the persistent search which was made by the ecclesiastical authorities for these contraband Testaments, it is said that only two of the octavo copies remain to-day, and a mere fragment of the quarto. Such was the condition of England at this time. The printing press was almost entirely prohibited, and the publication of the Testament in England was deemed dangerous and encouraging to the Lutherians.

In the Day's Work. By D. B. Updike. Oxford University Press. London: Humphrey Milford. Octavo. 10/6 net. Limited edition, 36/- net. (Printed by D. B. Updike, The Merrymount Press, Boston, U.S.A.)

These essays give expression to the best of such ideas as can have arisen in the minds of those who have hoped for and tried to create an improvement in things in general, and in printing in particular. To take things as they are, to build on what has been well done, and to make a fine alloy of tradition, fine craftsmanship and the machine, is what many printers are hoping to do, and Mr. Updike skilfully suggests a habit of mind which will lead to this desirable end.

We can imagine that printers will buy this little volume and keep it at home ready to hand for those moments when the thoughts of a printer, who is a master in every sense of the word, will be appreciated for their inspiration and sure counsel. In a lucid analytical style, with a happy simile and an average of at least one epigram a page, the first essay gives a simple straightforward lesson on the subtle psychology involved in leading the customer in the right way, so that he may choose for himself the style that is best for him, rather than the style that he thinks he wants.

We are reminded, too, of the interest that attaches to every job in the day's round, with a gentle reminder that it is just as interesting and important to design a label that is really fit for its purpose for a homely pot of jam as it is to produce a sumptuous edition of Aristotle.

English printers (the best of them) have reason to be proud of Mr. Updike's good opinion of their work, and in a talk about "Style" he places English printing at the present time at the head of typographic achievement.

"The Seven Champions of Typography" is one of the titles, but Mr. Updike has only been able to find six of them. The reader is invited to fill the seventh place, and if the invitation is widely accepted we shall soon see an improvement in quality and the appreciation of good printing. But the services which D. B. Updike has rendered to this cause have already shown this generation of printers where to look for their seventh champion.

The temptation to quote is hard to resist; but we will content ourselves with one extract. The vexed question of decorating the typographic page is always one that calls for careful consideration, and the author goes very near the truth when he says that "Badly-conceived ornamentation and the *abuse of good ornament* have become so general that the art of decoration is the art of leaving things out!" the author thereby reinforcing his expressed admiration for the work of Ratdolt in the fifteenth century. There are a few printers' flowers scattered thorugh the pages of his book, used with a cunning and nice discrimination.

Mr. Updike's book is delightful in every way, more so because it is printed by the author at the Merrymount Press, and displays the application of some of the principles about which he writes. The typographic dress is eminently suitable to convey the author's message.—R.B.F.

The New Book-Illustration in France. By Leon Pichon. 1924. London: The Studio, Ltd., 44, Leicester Square, W.C.2. Illustrated. Quarto; 168 pages; 7/6 in wrapper; 10/6 in cloth.

Books of this kind usually exist for their illustrations, but, although the pictures in this volume are necessary to the text and form a particularly valuable and interesting collection, the introductory essay by Mon. Léon Pichon, himself a publisher, is a most important contribution to the study of book illustration.

The author speaks particularly of French work; but a parallel may be taken from the study of English book illustration during the last thirty years. Greater progress, undoubtedly, has been made in France than in this country, and the French school of modern wood engraving has not its full reflection here. Unfortunately, we are still in the transition stage when publishers invite

artists to prepare illustrations for new books without due regard to the form that the volume is to take; whilst the illustrator himself usually works in his customary style without making any particular effort to incorporate in his drawing the spirit of the work which he is illustrating. Occasionally one meets literary purists who will not tolerate any form of illustrated book, and, although we desire to encourage book illustration, it must be admitted that the large majority of illustrated books published in England lack interest and cohesiveness. To attain success the basic thought should be that a book is a piece of architecture, and if it is to be illustrated the illustrations must be part of a unified whole.

The progress that is being made in recent years in France is, without question, due to the untiring efforts and enthusiasm of Edouard Pelletan, who set himself the task of creating books which in their typography expressed the feeling and the atmosphere of the subject matter, whilst the illustrations not only formed a part of the architecture of the typographic page, but in addition reflected the spirit of the subject. Pelletan made " himself the moving spirit among a band of artists of varying capacity, to whom, one and all, he communicated his love for the book *as a book,* his contempt for affectation, *pastiche,* and working for effect, and succeeded in the difficult task of making them accept the subordination of the picture to the typography. It is curious to observe that it is to this subordination and this discipline that we are beholden for the Renaissance of illustrative art, precisely as its previous decadence was due to the somewhat anarchic liberty demanded by the earlier illustrators. The reason is that there can be no fine book without severe discipline (or one might almost say constraint); and it had been too often forgotten that the illustrator must work to a very definite end and think of the beauty of the book as a whole instead of giving free rein to his fancy. A man may be an admirable painter, endowed with great sensitiveness of vision, or a masterly draughtsman, skilful in the rendering of form and values with pencil or brush, and at the same time be a very mediocre or even deplorable illustrator if he sees the white spaces of a page only as the frame for a picture and disregards the harmony of the whole. For this work an uncommon modesty of self-effacement is needed."

Unfortunately, the death of this young reformer some ten years ago prevented his witnessing the wonderful results of his enthusiastic crusade against poor book production; but his name will go down to posterity among book-lovers not in his own country alone, but everywhere where books are regarded as something more than paper and printer's ink. Whilst Mon. Pichon readily favours wood-engraving as the ideal medium for book illustration, he realises that photographic reproduction processes also have their place, and can when the occasion demands be used with distinction.

The illustrations cover 127 pages, and extend over the complete range of this interesting period of French book illustration. It seems a pity that such an excellent piece of work should have been disfigured by the typography of the essay, which in our copy is scarcely worthy of " The Studio," or of the subject matter; the illustrations, however, are admirably produced, and the book is to be commended to all who desire to assist in improving our standards of book illustration.

The Construction of Roman Letters. By Albrecht Durer. Printed by Bruce Rogers at the Printing House of William Edwin Rudge. Dunster Book Shop, Cambridge, U.S.A. London agent: W. Jackson, 16, Tooks Court, London, E.C.4.

America places the highest value on the typography of Bruce Rogers, but we in England have few opportunities to appreciate the qualities of the books which have made for their designer such an enviable position in American printing circles.

The present example is a choice presentation of a portion of a treatise printed in 1917 for the Grolier Club, and is perfect in every way. It is a slight octavo bound in black paper with a marbled endpaper on a black ground. The paper is deep-toned nichelet or something similar. Each page shows one letter and its constructive diagram, and is dressed with a perfectly-balanced rule treatment printed in a toned brown. An example of the way to produce a limited expensive book without making it " precious." We wonder whether it could be printed just as well, but at less cost, for students and others who like to own beautiful books, but cannot always afford to buy them.

"S"

One of the brightest little house organs in the printing trade is " The Monthly Statement," sent out by Messrs. Wm. Strain & Sons, Ltd., Belfast. We take the following from the February issue:—

" We are thorry to thay that our compothing room wath entered latht night by thome unknown thcoundrel, who thtole every ' eth ' in the ethtablithment, and thucceeded in making hith ethcape undetected. The motive of the mithcreant doubtleth wath revenge for thome thouppothed inthult.

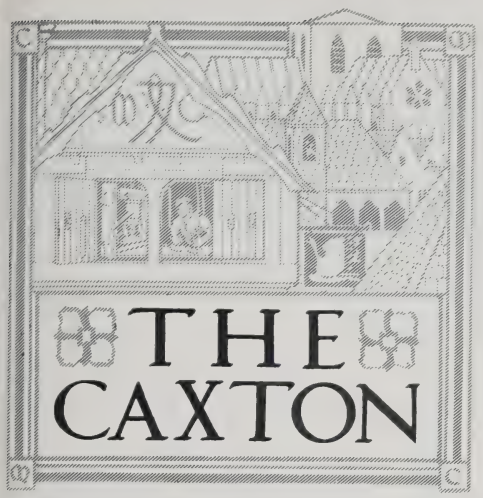
" It thhall never be thaid that the petty thpite of any thmall-thouled villain hath dithabled uth, and if thith meeth the eye of the detethtable rathcal, we beg to athure him that he underethtimated the rethourceth of a firth-clath ethtablithhment when he thinketh he can cripple it hopelethly by breaking into the alphabet. We take occathion to thay to him furthermore that, before next Thurthday, we thall have three timeth ath many etheth ath he thtole.

" We have reathon to thuthpect that we know the cowardly thkunk who committed thith act of vandalithm, and if he ith ever theen prowling about thith ethtablithment again, by day or by night, nothing will give uth more thatithfaction than to thoot hith hide full of holeth."

21 Years on the Caxton

Mr. E. A. Orchard, advertisement manager of The Caxton Magazine, has just completed 21 years' service with Messrs. F. W. Bridges, Ltd., and at a social gathering of the staff of the firm Mr. F. W. Bridges handed to Mr. Orchard an 18-ct. gold hunter watch with the following inscription: " Presented to Mr. E. A. Orchard by F. W. Bridges, Ltd., proprietors of The Caxton Magazine, in appreciation of 21 years' loyal service in connection with that journal. Feb. 9, 1925."

Mr. A. B. Evans, formerly of Messrs. George Mann & Co., Ltd., Leeds, and for the last four years with Messrs. R. W. Crabtree & Sons, Ltd., has now been made a director of the latter firm.



London, March, 1925

WE are receiving just now kind appreciative letters from quite different types of people in praise of this journal. We like to have such messages, of course. But we should enjoy even more letters which pointed out to us just what features our readers find most useful. Of course we try and meet the needs of all our readers, and in considering the up-lift of the craft, and the improvement of our work generally we think we are serving the best interests both of the employer and the employed. We can heartily congratulate ourselves on the keen interest being shown in this direction. One has only to attend any of the various lectures on trade topics to see that. We are more and more assured that this common interest in our craft is at once the hope of trade improvement and the way to still better relations between all sections of the trade.

AT some future date the whole question of apprenticeship to the printing trade will have to be tackled in a much more radical fashion than anyone seems to suggest to-day. This matter is vitally bound up with the future of the trade. It is all to the good that the right kind of youth should be selected for training, and that provision should be made to secure that his training should be adequate and complete. But the forward-looking printer must know that we are not training enough men to meet the demands of the future. The present limitation of the number of apprentices is far too drastic. It would be so if every man on the books of our unions were thoroughly efficient. But they are not. Leaders of the men would readily acknowledge, we think, that a certain number of men in the unions are very inefficient, and some almost unemployable Evidence is abundant that master printers needing temporary help for anything but the most ordinary work find the greatest difficulty in obtaining it. But, apart altogether from that fact, it is becoming imperative that this matter of keeping up the supply of well-trained and qualified youths who shall take their place in the craft is bound up with the future prosperity of every branch of the trade. Reliable statistics on this subject are not available to us, but we suggest that it would be a most illuminating thing if Mr. Walter Hazell would continue his investigations on apprenticeship along these lines; it would be of immense service. Statistics of the present ratio of apprentices to craftsmen in all branches of the printing trade, extended to their inevitable result, say, in 20 years' time, would, we suggest, be not only a challenge to existing arrangements, but something in the nature of an alarm to all who are interested in their work and have any concern for the retention of Britain's present place in the printing world.

A SIGNIFICANT omission from the honours lists of successive Governments is the names of outstanding craftsmen. All sorts and conditions of men are exalted—for reasons good and not so good. Merchants, stockbrokers, lawyers, artists, brewers, racehorse owners, company promoters, politicians, are all deemed worthy of presentation to the King for marks of Royal favour. But where are the craftsmen? We are an industrial people. Our name has gone out to the ends of the earth as makers and artificers.

A recent overseas visitor to Britain, whose holiday had been wisely planned, left it on record the other day that he carried away with him two outstanding impressions. First, the wonderful variety of scenery in such a limited space—the mountains and valleys of Wales, the Thames Valley, the wealds of Kent, the dales and lakes of Cumberland and Westmoreland, the moors of Yorkshire, the Sussex Downs—to say nothing of Scotland and Ireland.

Then he was impressed by our craftsmanship. Wherever he went he found men *making* things with such a stamp of thoroughness and often of beauty as would carry these goods to the far islands of the seas, far out of reach of comparison with anything produced elsewhere. That is a great tribute. We are a nation of makers. Be it a bridge or a book, a shoe or a ship, the British know how to make them. In music and art, science, philosophy and letters, we make our contribution to the riches of the world in varying degree. Often we have dull unproductive intervals in these realms. But never since the great industrial age set in have we ceased to hold pre-eminence as makers of things.

Now it is disappointing to find a country, dependent to such a degree on hand-craftsmen, so slow to recognise their worth and place in the nation's heirarchy. It is true our Arkwrights, Stephensons and Armstrongs have been honoured, but their's was an inventive genius; our great ironfounders, engineers, and colliery proprietors, too, have been singled out for distinction. But we are thinking of men who do what other men dream, who actually fashion in steel or stone what others put on drawing paper. We are not for one moment minimising the work of the dreamer or the visionary, the architect or the engineer; but our plea is for those also who do the work.

That is a long preamble to the case we are going to put for the master printer—the real master printer—not the man who runs a printing business. Never so far as we can find has such an one been honoured as others we have mentioned have been. Yet it would be singularly fitting that men who have given themselves to the enrichment of the printed word, who have taught us the beauty of simplicity, the nobility of straightforwardness, the meretricious tawdriness of useless fuss and filigree, and have made the pages we handle day by day a pure delight—it would be fitting, we say, that such men should have the work they have so lovingly done recognised as other good work is recognised.

Of the merits of a successful brewer or distiller, a stockbroker or a tobacco king, we are not competent to speak. But this surely may be said: the good they confer must of necessity be restricted. But there is no home so lowly nor life so poor where the English printed word is not read, and where the influence of the master printer does not make itself manifest.

Here is an opportunity for a Prime Minister who himself comes of a stock of ironmasters and artificers, and who knows better than most politicians the part the craftsman has played in the making of England.

Many congratulations were received by Sir Robert Baird, K.B.E., last month, on the celebration of his seventieth birthday. Sir Robert entered business under his father, the late Wm. S. Baird, one of the founders of the firm of W. & G. Baird, Ltd. On September 1, 1870, The Belfast Telegraph was founded, and following his father's death, in 1886, Sir Robert assumed control of the firm, and subsequently several other now flourishing papers were started. He was knighted in June, 1921, during the King's visit to Belfast. During the Great War he acted as Irish representative on the Admiralty, War Office, and Press Committee of Great Britain and Ireland. He was president of the Master Printers' Federation, 1910-11; president of the Irish Newspaper Society; twice president of the Ulster District, Institute of Journalists; and is chairman of the Newspaper Press Fund (Belfast District), and president of the Advertising Club of Ulster.

BOOKLETS
Collective Advertising
The
SPECIALIZED EDITORIAL AGENCY
is prepared to write and illustrate with original drawings Booklets which printers may be asked to undertake in connection with the new advertising campaign.
¶ This Agency has a Staff of competent writers and artists capable of dealing with this class of work.
Specialized Editorial Agency.
(EDITOR:— A.E.OWEN JONES)
4 VERNON PLACE, SOUTHAMPTON ROW,
LONDON. W.C.1.

Exhibition Notes

A Royal Opener

WE are delighted to announce that H.R.H. Prince Henry has consented to open the Exhibition on Saturday, May 16. Without any pressure beyond the invitation of the Organiser, Mr. F. W. Bridges, setting forth the importance of the Exhibition, the Prince Henry at once expressed his pleasure in accepting the invitation. This willingness of the members of our Royal Family to associate themselves with the best interests of their people gives immense pleasure to us all. Never in the history of our country have the bonds uniting the Royal Family to the people been so soundly forged as they are to-day. As a trade we have every reason to be proud. The Prince of Wales, the Duke of York, and Prince Henry have each honoured the Printers' Pension Corporation with their presence at the annual banquet, and now comes this further favour to us as a trade. The presence of a member of the Royal House at a time when we are exhibiting the products of our skill, and demonstrating how varied and wonderful is the work which goes to the production of the printed word, will be most heartily and thoroughly appreciated.

A UNIQUE COLLECTION OF PRINTING.

By the courtesy of Mr. George W. Jones, of The Sign of the Dolphin, visitors to the Exhibition are to have the opportunity of seeing that rare and wonderful collection of printed books which this great enthusiast has gathered together in the course of years. In that wainscotted room in Gough Square where our great master printer does his wonderful work there are gathered together specimens of some of the oldest, rarest and most beautiful examples of printing in the world. These are to be shown at the Exhibition. Of course, it will be necessary to have every possible care taken of these valuable things, and we are sure our friends on the Council and amongst the exhibitors will be as zealous as we are that not the least harm shall come to any of them. In one sense Mr. George W. Jones is but a trustee of these things. With rare magnanimity he has bought them—often at great cost and in competition with powerful American collectors—but all British printerdom is the richer for his expenditure. It will afford immense pleasure to thousands to see these founts of inspiration—these origins of our art and craft.

VISITS OF OFFICIAL BODIES.

As on former occasions, special days are being set apart for visits of official bodies. The following is the list of these official visits—arranged up to date, but others will be added so that practically every section of the printing and allied trades will not only visit the Exhibition, but have some opportunity of conferring together either at lunch or tea:

Saturday, May 16.—Printing, Bookbinding and Kindred Trades Overseers' Association.

Monday, May 18.—Worshipful Company of Stationers.

Tuesday, May 19.—British Photographic Manufacturers' Association.

Wednesday, May 20.—Joint Industrial Council Convention.
Federation of Master Process Engravers.

Thursday, May 21.—Federation of Master Printers.

Friday, May 22.—Newspaper Proprietors' Association.

Saturday, May 23.—Printers' Managers' and Overseers' Association.

Monday, May 25.—Electrotypers' and Stereotypers' Managers' and Overseers' Association.
Caxton Convalescent Home Concert.

Tuesday, May 26.—Stationers' Association of the United Kingdom.

Wednesday, May 27.—London Master Printers' Association.

Thursday, May 28.—Printers' Pension Corporation Day.

Saturday, May 30.—Jobbing Guilds' Re-union.

THE GREATEST OF ALL PRINTING EXHIBITIONS.

It is safe to say now that the forthcoming Exhibition will eclipse not only those that have gone before it in this country, but all printing exhibitions wherever held. The advance made in certain departments of our trade during the last four years has been phenomenal. New processes will be shown, and new and perhaps revolutionary machines will be on view. But it is in the realm of photo-litho and offset printing that most interest will centre. Things have bounded along since the last show, and printers everywhere are keen to see the latest additions to machinery or material whereby efficiency may be secured.

TRAVELLING FACILITIES.

The Exhibition Council and the Organisers are finding the railway companies slow to recognise the educational value of such an exhibition as ours It appears that the privilege of travelling at a fare and one-third is restricted to conferences, but we have not given up hope that the railway authorities may yet come to see that this great assembly of craftsmen contributes to an extension of knowledge and processes, just as gatherings of learned societies. Meanwhile we suggest that where any considerable number from one town and district could arrange to visit the Exhibition on the same day, one or other of the excursion agents would arrange the matter for them. Four hundred are coming on one day from Otley, and this example might be followed in other towns. Then, of course, for smaller numbers the local associations can always arrange pleasure parties for ten or more at greatly reduced rates.

JOINT INDUSTRIAL COUNCIL CONFERENCE.

On Wednesday, May 20, the Joint Industrial Council meet for conference at the Exhibition. The programme is not yet completed, but this will be a most excellent opportunity for bringing the work of the Council to the notice of the printing public, and of most useful propaganda.

CRAFTSMAN'S CORNER

Devoted to plain, homely talks about Letterpress Printing. Design, layout, type, composition, illustration, paper and ink will all receive attention as occasion demands; and Specimens sent in for Review which contain features of special merit or interest will be reproduced in these columns.

CONDUCTED BY H. B. NAYLOR.

BETTER PRINTING! "Ah!" says the cynic, "another excuse for charging more!" Nothing of the kind, my friend; it is merely a desire on the part of those interested in their craft to give better value for money. It is not—or should not be—how much will it cost? but, what service does it render? That is the part which really counts. If Better Printing proves a profitable investment—*i.e.*, brings increased business to buyer and seller, creates greater confidence, fosters or creates an interest in merchandise which did not obtain previously, and makes everyone more satisfied—then a fair price for services rendered is fully justified from all points of view.

"Then," says the cynic, "what constitutes Better Printing?" I think a reasonable answer can be given to this question; and if it does not satisfy *him*, the answer may at least prove helpful to others who are desirous of improving their work without running up costs. Better Printing is not the prerogative of the craftsman-specialist; it is but a more careful analysis of the job in its various stages.

We all know what handbills are—their uses are legion—and I propose to use for demonstration purposes one kindly sent me by D. R. King, secretary of the Midland Printers' Alliance, shown as Example 19.

A handbill derives its name from the purpose for which it is used: it is something for placing in the hand of the passer-by, or for disseminating a certain piece of information among those whom it may concern.

Care should be made in type selection. It should take no longer to decide to set a handbill in plain, readable types, types that for display lines and run-on matter harmonise well and help each other, not fight each other for supremacy. (More time is frequently absorbed where half-a-dozen series are introduced, because of the difficulty of deciding in which sets of lines or groups of wording to use them.) Where this greater purity of style is followed, the only point to settle is the sizes to use; and by reducing the number of feature lines to a minimum, that decision is more easily reached.

Caslon Old Face roman and italic has been used for Example 19. Among other series that could be suitably used for such a purpose may be mentioned: Baskerville Old Face, Bodoni, Garamond, Goudy, Kennerley, Scotch Roman, Trajan—all these and many more would give reasonable satisfaction inside the same style of border rules; none of them need have a decorative border for this purpose. Even plain Old Style would do for everything but the two main lines—these are unquestionably helped by the characteristics of the Caslon lettering being more fully developed in the larger sizes than would be the case with plain old style. Most printers of to-day, large and small, should be able to meet this requirement.

Example 19 contains an unusually large amount of matter for a handbill; but from the typographic layout point of view I confidently recommend it as a fine study. Notice how the lecturer and date lines gain in colour value; whilst the subsidiary lines, though in larger type, are more approximate to the colour value of the text.

Another point concerns margins and whiting out. It should be a policy to avoid having the same space between edge of paper and border rules, and between border rules and type. This has been well observed in Example 19; and, as there is such a lot of matter, preference has been wisely given to more space between type and rules. This tends to easier reading because of the proportionate *variation* (instead of similarity) of white in the most essential places.

The name line is approximately right for position: about one-fifth of the way down—known as the "eye line."

To my mind, there is one point which should be featured in most handbills—even at the cost, if necessary, of subduing the date or place line—and that is, "What is it?" In Example 19 there is nothing to indicate "at a glance" what it is all about. I am prepared to believe, in this instance, that as this bill was intended for certain people only in Birmingham, among whom the name of Dr. John Robertson was well known and a draw in itself, the nature of his subject was to a certain extent a foregone conclusion, and might be considered of relatively minor importance from the display point of view. In like manner, names of leading politicians and actors would be a sufficient draw; hence my acceptance of the comparative obscurity of subject in this example, though I cannot recommend it as a general practice.

Having settled on the type, it is necessary to choose a suitable paper. "Oh! it's only a handbill—anything will do!" is frequently the expression used. However true this may be concerning some of the rubbish pushed into one's hand in the street or elsewhere, for a bill such as Example 19

—circulating among individuals who are credited with having more refined taste—cheap, shoddy paper would (or should) have meant failure. A good quality Abbey Mill paper has been used, soft, responsive to ink and impression, and in sympathy with the type face that has been used.

Old Face types should never be printed on " art " paper, particularly glossy art and chromo paper. The reason why is not far to seek. These real Old Face types were designed before art paper was a commercial proposition, consequently the hair lines were cut without any regard for very delicate or " surface " printing. On art paper you print *on* the surface; with most other makes of paper —excepting, perhaps, some friction-glazed or highly-calendered paper—you print *into* the paper.

Another thing, too, with most of the very cheap papers: the body is generally made from wood pulp, and loaded with deleterious substances to give bulk and weight—to the detriment of the wear of type and formes generally—and the ink does not take so kindly, hence it has to be squeezed in, thereby using more ink.

The moral is plain: Better paper and better ink do not cost so much proportionately because they each give better service. A good ink will invariably give a greater covering capacity, bulk for bulk, than cheap ink, besides appearing denser and enriching the appearance of the work.

Before leaving Example 19, there is an unusually interesting piece of information concerning it which is worth retailing here. This handbill is but one

Birmingham and District
District Committee of the Joint Industrial Council.

Dr. John Robertson

Medical Officer of Health for Birmingham,

HAS KINDLY PROMISED TO LECTURE ON "HEALTH QUESTIONS IN THE PRINTING INDUSTRY," IN THE LARGE LECTURE HALL OF THE SCHOOL OF ART, MARGARET STREET

On Thursday, February 19th, 1925

at 6-45 o'clock p.m.

As is well known, Dr. Robertson is in charge of the communal health of the City—a task of great importance, and one which it is only right to say he has discharged with conspicuous ability and success. Unlike the duties of most medical men, Dr. Robertson's work is preventive and not curative. There are, broadly speaking, two branches of medicine—curative or restorative, and preventive, and it is the latter we expect Dr. Robertson will speak to us about. In any event, his lecture will be of deep interest and value to every member of the trade, both men and women, employer and employee, and we are sure he will be given a warm reception for his kindness in coming specially to address us.

At the close of Dr. Robertson's Address

Mr. W. C. WARREN, Secretary of the National Society of Electrotypers and Stereotypers,

will refer briefly to some cases of Lead Poisoning that have come under his notice, and then exhibit, explain, and advocate the use of the new Dross Containers that have recently been put upon the market. Mr. Warren is not alone a well-known Trade Union leader, but is also a member of the Health Committee of the J.I.C. and a warm supporter of its work. Every stereotyper and electrotyper in the city and suburbs who appreciates such service as Mr. Warren has given will be present to greet him. His address will be very interesting and convincing.

The Chairman of the District Committee,

Mr. B. BISHOP (Society of Lithographic Printers) will preside.

Don't forget the date:

Thursday, February 19th, 1925, at 6-45 o'clock sharp, in the School of Art, Margaret Street.

ALLDAY LTD., BIRMINGHAM. P.T.O.

EXAMPLE 19—Difficult copy well handled.

of many pieces of printing issued by the Midland Master Printers' Alliance; and on the reverse side of this handbill have been printed its operational times. The Alliance believes, by the continuous and unflagging issue of various kinds of work and showing their times, that in the long run this will almost imperceptibly influence the trade for good and provide reliable data for estimating.

They are to be heartily congratulated on their plan for approaching such an interesting proposition; and my appreciation of their efforts cannot be better expressed than by quoting their own words, which appear on the back of their handbill (*i.e.*, on the reverse side, not shown here, of Example 19):

"JOB NO. 4.

"The following are the operational times for the different processes in producing 2,250 copies of this handbill as overleaf (exclusive of printing in these particulars).

"The style of the handbill shows how neat and effective this simple method of display can be made, and it is a tribute to the work being silently done at the Printing Classes at the School of Art in Birmingham, under the direction of the enthusiastic director, Mr. B. J. Fletcher.

"There is an almost unconscious uplift in this class of work, even though it be merely a handbill, a 'throw-away,' as it is called. One catches at a glance the spirit of the artist craftsman 'back' of the job, to use an Americanism, with its refinement, its dignity, its ability to fashion the beautiful. If our apprentices can only get this spirit, what a 'craft' will be ours in the future!

Hand composition	4 hours
Author's corrections	½ hour
Printing on platen	3½ hours
Cutting paper	¼ hour

Paper: 6 quires double crown at 17/- per ream, plus one-sixth for handling."

(There are also blank columns against above items for adding local hourly rates and costs.)

Example 20 is the front page of a stiff cover folder with an 8-page inset, from the same source as Example 19, announcing the preliminary details of the Federation meetings for 1925. It is set in monotype Garamond and printed in black and orange on buff-coloured stock. Splendid use has been made of the white space, and the grouping is excellent. Border and ornament only are in orange, *all type in black*.

I emphasise this latter as a reminder to many folks who think that, because main lines in type are set larger than the remainder of job, they are suitable for colour. This is not generally the true facts of the case. Main lines are set in larger type because they are that part of the message which it is specially desirable to emphasise; and by putting them in a weaker colour than that of the smaller type frequently recedes them: *i.e.*, reduces the emphasis. If you feel such lines must go in colour, set them in a slightly heavier type or in a size larger than if they were to go in the body colour or black—then they will retain their more normal relationship in emphasis valúe, and the colour may help. If the lines *look* right all in black, then it stands to reason, if you pick one out and print it in a weaker colour, that it must lose in attraction value in like degree, colour notwithstanding.

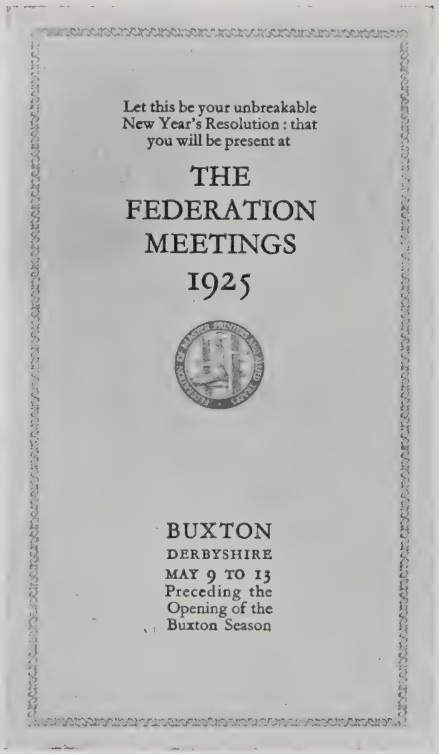
Example 21 shows two of the inside pages of the same Federation folder—also set in Garamond, and printed in black on good-quality toned stock. The type is in a readable size, each paragraph starting with the first line in capitals, break lines being centred. The margins are well placed. In the actual job the paper is rather thin and transparent, showing the back printing through—but this has to a great extent been "dodged" in reproduction.

A separate slip giving operational times also accompanies this folder, but it is useless to repeat the times here (as I have done with Example 19), because it is not convenient to reproduce the whole folder. Sufficient to add it is work of a very high standard; and it is gratifying to know the Midland Alliance are campaigning on the right lines.

Examples 22 to 30 have been selected from a collection of work by the Baynard Press (Sanders, Phillips & Co., Ltd.), 32, Chryssell Road, London, S.W.9, under the directorship of R. B. Simnett.

I remember this firm many years ago when they were in Upper Thames Street; and it has been most interesting to watch the development of their business on the lines of good work well done.

Better Printing! The Baynard Press are always trying to produce it—from the simple 8vo leaflet and circular in one colour to the multi-coloured many-paged catalogue, brochure, and booklet. Each job is most carefully planned and printed.


Let this be your unbreakable New Year's Resolution: that you will be present at
THE FEDERATION MEETINGS 1925
BUXTON
DERBYSHIRE
MAY 9 TO 13
Preceding the Opening of the Buxton Season

EXAMPLE 20.

Reproducing them here in one colour only robs them of much of their beauty, but there is sufficient to show the handiwork of the master craftsman. I will briefly describe a few of their jobs.

Example 22 (Betteshanger Colliery) shows the first of a four-page programme. Set in Dolphin; printed in black (except for the "pit pony" and fruit in the decorative portion, which are in red), on stiff antique finish card. Size 9½ in. by 6 in. Notice the freedom from restrain, the ample margins, and effective balance.

Example 23 (Equip the Child) is the front page of a four-fold card issued by the Legal and General Assurance Company concerning the insurance of children. All hand-drawn and printed in black, except the shield, helmet, spear, and "ground" on which the young soldier is "stepping it out." Printed on a cartridge 5½ in. by 3¼ in., the bold treatment, the solid groundwork, the warrior-like attitude, all convey a feeling of strength and security—which is probably the desire of the insurance company in its appeal to parents.

Example 24 (Norway, 1923) is the centre picture of a six-page folder printed in orange, blue and black, on stiff white board 4½ in. by 2⅝ in. The colouring is rich; and as on left and right fold of this view is a calendar for the twelve months, there is created a desire to slip this little card into the pocket, and each time a reference to it is made, one is faced by the picturesque allurements of a holiday in Norway.

Example 25 (How to Grow Old Gracefully) is the cover title to a 16-page booklet measuring 8½ in. by 5½ in. The foliage and grass are in green, remainder in black. Dignified, restrained, yet free from all suggestion of narrow confines (the picture represents glorious country life and eternal youth), it possesses an arresting charm which is at once an invitation to go further into the secrets of a long and happy life. To quote one phrase only: "The path which leads to a green old age is the path of enlightened moderation"—if we could only manage to apply these two last words to our daily work of printing, many a *task* might then become a *pleasure*.

Example 26 (Emscote) is an exquisite large-post 4to letterhead printed in black for a resident in Sutton, Surrey. A happy inspiration carried out in a very pleasing manner.

Example 27 (E. W. Allen Baker) is another attractive letterhead—for a farm. Set in Kennerley and printed in black, the haystack illustration

eye turns, hill and dale in all their rugged and verdant glory hold the attention. Nature's artistry always entrances and inspires the printer.

THE TOWN IS CLEAN, WELL KEPT, and nicely laid out, for it is the home of the well-to-do—of many who, having found success, have retired from the heat and burden of the day.

THE SURROUNDING COUNTRY has many attractions too, both scenic and historic. Haddon Hall—"a love story in castellated form"—will claim a visit. Here hundreds of young men and maidens have reconstructed in imagination the romantic elopement of the lovely Dorothy Vernon with the young John Manners. Chatsworth, the seat of His Grace the Duke of Devonshire, His Majesty's Lieutenant of the County, has only to be mentioned to conjure up visions of the impressive home of one of England's ancient and honoured nobility. It is known as the Palace of the Peak. As owner of the "Buxton Advertiser," we claim His Grace as a member of the Federation. He has already kindly consented, if his engagements permit, to be the guest of the Federation at the Banquet; and it is hoped we shall, as a double honour, have the presence of the Duchess as well.

CHATSWORTH & HADDON HALL are only two of the many interesting spots that may be visited. On the kindly invitation of Colonel H. K. Stephenson, it is probable a Garden Party will be given at Hassop Hall on one of the afternoons.

IN ADDITION TO THE BUXTON and High Peak Golf Club at Fairfield, new links are being made at a cost of several thousand pounds, and it is expected these will be open before our visit. Mr. Fred Jefferson, the Captain of the Federation Golf Club, may be relied upon to make every necessary arrangement for golfing visitors.

IT HAS BEEN FOUND POSSIBLE TO arrange that members of the Federation may have free access, on production of badge, to the beautiful Buxton Gardens, situated in the centre of the town, and covering twenty-three acres of ground. The Pavilion, which looks like a miniature Crystal Palace, has been engaged for the Alliance Lunches and the Federation Banquet. It is capable of seating 2,000 people. In these grounds, tennis, croquet, bowling and boating are available.

SO FAR WE HAVE NOT MENTIONED that Buxton is one of the most popular Spas in the country. The thermal and chalybeate waters and the warm natural baths have, of course, a high reputation.

THE MAYOR AND CORPORATION have kindly promised a Civic Reception, which it is provisionally suggested should take place on Monday evening, May 11th.

EXAMPLE 21—Showing centre opening of Example 20.

A FINE GROUP OF SPECIMENS BY THE BAYNARD PRESS.

Example 22—Betteshanger Colliery. Example 23—Equip the Child. Example 25—How to grow old gracefully.

Example 24—Norway, 1923.

Example 26—Emscote Letterhead. Example 27—E. W. Allen Baker Letterhead.

Example 28—Friday Street. Example 29—Marconiphone Voice Amplifiers. Example 30—Via Marconi.

is in blue-green. Suggestion without over-elaboration scores well here.

Example 28 (Friday Street) is a 12-page brochure for Cooke, Sons & Co., Ltd., carpet weavers. It is evident, from the cover design here shown, that this firm rely on trade marks or trade emblems as the standard attraction, rather than show something that is more direct evidence of their wares; but the inside pages each depict quaint illustrations (in three-colour line blocks), showing various stages in the manufacture of carpets. An excellent production—and with a far more interesting inside than the cover would lead one to expect.

Example 29 (Marconiphone Voice Amplifiers) is the front page (8¾ in. by 5½ in.) of a six-page folder Solid colours of red and black only are used, the centre part being almost entirely red. A very rich effect, the colours being well balanced and well placed to get the best results.

Example 30 (viâ Marconi) shows a rich, solid red on buff stock, 7⅛ in. by 5 in., only the framework of the Eiffel Tower and "viâ Marconi" being in black. This is the cover of a booklet describing the Wireless Telegraph Service; and on each inside page are marginal illustrations suggestive of the wonderful service to be found at Radio House. "Let your picture leave nothing untold" is the slogan evidently relied upon here—and to the quick thinker it is "transmitted" at once.

All specimens and correspondence for Craftsman's Corner should be sent direct to H. Naylor, 8, Aubert Park, Highbury, N.5. Specimens for criticism only can be answered under "Appreciations," and a nom-de-plume may be used.

What Does the Price-Buyer Buy?

By C. M. JICKLING

. . . and, frankly, I will place this business with the printer who quotes me the lowest price.

HERE was a man who represented the manufacturer of an exceptionally fine product. He wanted an attractive book, especially well done, and he had asked five printers to submit dummies and prices on his general specifications. When he sent out his requests for estimates he had in mind a book that would be simple and rich in its typography, and beautiful in its presswork. But with him it was not a question of how much it was worth to produce the book as it should be handled; it was merely a matter of how little he would have to pay for it. He thought that "printing was printing," and that any one of the five printers could produce the book as well as the others. The sad, though it should not have been unexpected, part of the transaction was that the finished book did not come up to what he expected in typography and presswork.

Two of the five printers were in a position to produce the book as it should have been done. The other three were good printers in their fields, but a study of their past performances would have revealed that the book was beyond their abilities and facilities. One of the three landed the order. And then the battle began. The "price-buyer" bought just what he paid for—a "price" job that was really expensive. In most of its details it lacked the little touches that would have made it effective as a book coming from a concern with a reputation for quality to maintain.

In another case a printer who was capable of doing good work cut his price in order to make an impression on a shrewd buyer. In view of what was considered a regular price for the work, the buyer thought he was about to get 130 cents' worth of printing for the dollar, but the printer knew where he could cut quality to keep from losing on the work. Every workman in his shop was given so much time to do his part in the production of the printing. Wherever possible the "price" job was handled passably well instead of as well as it should have been done. The cost of composition was reduced to less than two-thirds of what it should have been; make-ready suffered, and the press was run faster than its usual rate. The printer also managed to save on ink and paper, and so was able to turn out the work without a loss. But no one who received the printing was more than ordinarily impressed, and, consequently, the buyer, in trying to save a little money, really paid a big price for what he bought.

Nine out of ten "price-buyers" do not know what a piece of printing should actually cost. When prices vary in competition they usually think that the prices cover the same piece of printing. As a matter of fact, if the buyer accepted every proposal that he received on a certain job, he would have an even wider variety of printing than he had prices. In any line of business estimates are bound to vary. That is true not because one man or another has a monopoly on inside tricks, methods or secrets, but because each man has his own ideas of just how he will handle the buyer's specifications. In the printing industry the printer is influenced by his particular interpretation of a buyer's needs and specifications, and also by his own standard of practice.

If a buyer asks prices from five different types of printers, the bids will vary considerably, and, no matter which one he accepts, the buyer will get just what he contracts to buy, as estimated and visualised by the particular printer. If a buyer asks two printers, who, as investigation has proved, are equally equipped and are on about the same level as far as past performances are concerned, the two proposals may still be quite far apart. The difference will be one of interpretation. And the buyer will get what he pays for.—The Three Circles.

The registered head office of the National Union of Printing, Bookbinding, Machine Ruling and Paper Workers has been removed to 88, Nightingale Lane, S.W.12.

QUADS

THEY tell me there are only 486,000 acres in Surrey, but I say the thousands are not 486, but 487. We're at 6's and 7's, you see; and, Mr. Printer of the "Caxton," it's through you. I won't say it's your fault. It would be more fitting to say it's your virtue. For business energy is a high social virtue.

I DECLARE for the 487 instead of 486, because, to the admitted 486,000 wide acres, we have now, or shall very shortly have to add, a few hundred wise-acres, and, of course, the wiseacres' households. For the staff of Messrs. Percival Jones, Ltd., are shortly to establish habitats in pleasant Surrey. Yes, I think "wise acre" is a cap that fits. To start with—as our Genesis—it was a shrewd enough thing to go to Birmingham; or to get oneself born in Birmingham. It's a city of great tradition, and of no doubt a great future.

THAT, to be sure, has rather a backhanded compliment sort of a look—telling Mr. Birmingham that he's a great man on his father's side and a great man on his son's side. But "honest Injun," I don't quite know where or what Birmingham is to-day. I don't think Birmingham itself knows. It seems to me to be marking time. Perhaps it's just pausing to take bearings. Anyhow, this one can say, it knows how to rear citizens like Mr. Percival Jones. He builds up a fine business, and as a city councillor he also helps Birmingham to realise itself as Walt Whitman's "great city"—the city of hearty, healthy, self-respecting humans and happy and progressive children.

THEN Mr. Percival Jones, whose Genesis has been satisfactory, proceeds to Exodus. He says to the Lord Phar. of Birmingham, "Let my people go." He has heard of the land of Surrey, where there's never any flurry, and no one's in a hurry; at any rate, one's heard-say, that there's goodly land at Chert-say; so he has decided to cross over Jordan yclept Thames.

HE secures a new working centre at Chertsey in North Surrey, that interesting old Abbey-created town set in a small Thames peninsula. There in due course will rise homes for the Percival Jones staff.

WHEN Chaucer was studying his Merrie England, Chertsey dwellers were not all merry. The Abbot wanted to increase his "copyhold" profits. Whereupon Chertseyans rose in revolt and burnt the rolls. The Percival Jones staff will none the less try to increase their "copy" hold upon the community. The community can, of course, imitate Chertsey. It can burn the rolls of proofs which the Percival Jones press sends out. But, whatever is done, I think I see that "copy" hold becoming stronger and stronger.

IF I was asked why this firm had selected Chertsey, I should answer, "Why not?" ("Why not?" has, I am told, helped a witness before now when some barrister's insistent "Why?" was bothering him.) Why not, indeed, go to Chertsey? Moving from Birmingham to Chertsey, they are moving towards Weybridge, Chertsey's railway junction near that little river Wey. They're moving towards the Narrow Wey. That sounds all right.

CHERTSEY is set between a lot of lively communities. Reading's 100,000 are, I suppose, about 18 miles off, as the Ford flies; and Guildford, on the south, and Uxbridge on the north are much nearer than that. London is not 20 miles away.

THERE will be a lot of open-air pleasantness for leisured hours, I imagine, from what I remember as one who has spent some years in mid-Surrey. The most sober-sided, too, have their opportunity. Although little remains of the once great Benedictine Abbey, I hear that a good many old coffins have been unearthed; and I am assured that a lot more could be!!

JUST possibly, though, the merry motor-cycle and the push-bike, not to speak of that best motor of all, Shanks's Pony, may be taking the newcomers to view the 30 miles outspread of the Sussex Weald from the 1,100 ft. summit of Leith Hill, or the diversified and homely beauties of a country which both God and man have made, as seen from the 500 ft. crown of Box Hill nearer Dorking; or to visit the Hog's Back near Guildford, or Richmond Hill, or Reigate Hill, all in Surrey.

BUT I must change my topic. Sufficient for the day are these hills thereof. Just a final word, then, of congratulation to this fine firm. I for one owe them much gratitude. I know I may speak an unofficial word of welcome as they are coming into the Home Counties.

I WONDER if they realise, and if you do, that printing is the most metropolitan of all the large industries.

THEY will certainly be important members of the Home Counties Alliance. I daresay the new President will seem Strange to them at first. (For the interpretation of that saying ring up the Home Alliance Secretary, Michael, at the Old Bailey.)

ROYAL COMMISSION members wake up every twenty-four years. In 1901 a Royal Commission reported that it was against public policy to impose rates on any machines except such as provided or conveyed motive power or supplied some such over-all service; such machines in other words as could be regarded as practically completing the building as a building, and making it adaptable for different sorts of manufacturing processes.

Well, they had said that "someone ought to do something," and when we've said that, we've generally felt—haven't we?—that we've really done something, and are entitled to a comfortable snooze. The members of the Royal Commission slept.

But not the rating authorities. Their vigilance is remarkable. In that respect they leave little to be desired. Not a bad phrase that last, now one reads it over again. I desire a lot more than they leave me.

Though, of course, I also remember that a thousand public jobs have got to be done, and the money's got to come from somewhere.

A small church in Canada had to find money. Members agreed to be rated by a small committee. One well-to-do man said, "You've called for too much from me." The spokesman for the committee, in his blandest, gentlest manner, said, "Well, Mr. Grimble, of course you are the only one who can say as to that. We accept your statement that £30 should come off your share. Now we all know each other's position fairly well. Here's the list of allocations. Will you please distribute the £30 among Mr. Hardupp, Miss Seamstress, Mr. Shorterr and the rest. We've got to get the money from somewhere."

That settled him.

Every rating problem is more or less knotty. How now to get supplies for the public needs with the minimum of injury to the businesses or other properties producing recurrently the means of rate-paying.

The Royal Commission was against rating miscellaneous machines. Our Courts of Law, on the other hand, hold that any and every machine may be rated. And further anomalies of all sorts abound in this rating connection.

An Inter-departmental Committee has had to report to the Cabinet upon this trading matter, and its report is before us. It's conclusion is straight and strong.

"Here's a knot," said the Committee. Almost any two authorities seem to have two different rating methods. Again, two men, neighbours, making equal incomes, are very differently mulcted in rates because one uses much machinery, and the other, a doctor perhaps, uses none, or next to none. Again, Scotland and England are differently treated, and, of course, we are not rating machines run by foreigners and competing with ours.

"Here's a knot," said the Committee.

"Well," said the Committee, "here's a sword." So they've cut the knot. Their main recommendations are that all the machinery that lights or heats or conveys water or ventilates or drains or gives power or transmits power, or economises fuel or operates to give fire alarm or to put out a fire, or moves goods about the factory—all this machinery and plant like gasholders, tar-distilling plants, or water towers, shall be classified as in Class 1.

It shall travel first class. It shall pay for its first class.

But there shall be another second class of machines, rated at only a fourth of what the first class machines have to pay in rates. This Class 2 shall comprise all the rest of the machinery. Everything that is special to the business. They call it process machinery.

Except the hand-worked machines, and the loose tools. They're not classed at all. They're to pay nothing.

Here are a few lines extracted from the report:

(*b*) Machinery and plant shall be divided into Classes 1 and 2 in accordance with a definition framed on the lines indicated in paragraph 17 (iv.);

(*c*) The value of Class 2 machinery and plant shall be apportioned out of the rateable value of the whole hereditament and stated separately in the column of the valuation list now used for agricultural land;

(*d*) Class 2 machinery and plant shall (in the case of any rate within the definition in Section 9 of the Agricultural Rates Act, 1896) pay only 25 per cent. of the full rate;

(*e*) Valuations shall be made by professional valuers and at intervals of not more than five years;

(*f*) The necessity for estimating and recording the gross estimated rental shall be abolished;

(*g*) A panel of Referees shall be set up for the purpose of deciding, subject to an appeal to the High Court, whether any piece of plant or machinery falls within Class 1 or Class 2.

If these proposals become law, Lord Esher will once again be vindicated.

The law of England, this Master of the Rolls declared, is a persistent and in the main successful effort to reach and to express common sense.

For about twenty years Parliament has played battledore and shuttlecock with machinery rating. Balfours and Campbell Bannermans, and Asquiths and Lloyd Georges, and Bonar Laws and Baldwins, and Ramsay MacDonalds might come and go, but machinery rating reform postponement seemed to go on for ever. It never got forrarder. We have Baldwin again, and this time in majority strength. We have sensible proposals submitted by an Inter-departmental Committee. I suggest that clear, strong representations be submitted to the Government that in the opinion of our influential craft the Committee's recommendations should be carried into effect in an Act. If we take a lead, other industries will probably also add to the urging.

Frank Colebrook.

THE Seventh International Printing, Stationery and Allied Trades Exhibition will be held at the Royal Agricultural Hall, London, from May 16th to May 30th, 1925.

Penny Postage

Claims of Printing Trade

ANOTHER deputation has waited on the Postmaster-General for the purpose of urging a return to the penny post, the point of view of the printing and paper-making industries being submitted by representatives—including both workers and employers—of the Joint Industrial Council of the Printing and Allied Trades. It consisted of Mr. G. A. Isaacs (chairman of the Joint Council), General Wright Bemrose, Colonel Rivers Fletcher, Messrs. T. E. Naylor, M.P., J. McLehose, W. B. Wykes, E. H. Dennis, H. Skinner, and H. Chalk, together with the joint secretaries, Messrs. A. E. Holmes and A. E. Goodwin. It was fully representative of both panels—the workers and the employers. The deputation was received by Sir William Mitchell-Thomson, the Postmaster-General, who was accompanied by Viscount Wolmer, Parliamentary Secretary to the Post Office; and the case for the Joint Council was submitted by Colonel Rivers Fletcher, Mr. E. H. Dennis, and Mr. G. A. Isaacs, their statements being amplified by other members of the deputation.

Mr. G. A. Isaacs said the deputation represented 5,000 employers and 250,000 workers in the printing and allied trades. He urged that the early restoration of the penny letter post and halfpenny postcard rate would lessen unemployment in the sections of the industry immediately concerned and stimulate trade and commerce generally. The percentage of unemployed shown in official returns was 5 per cent., but this included those engaged in the newspaper and periodical sections of the industry. In the general printing portion of the industry a considerable amount of short time was being worked, and the unemployment was much higher. The restoration of the printed postal rates had been of great value to the industry, but the confusion which existed, not only in the public mind, but among printers and postal officials, as to what constituted printed matter was a constant source of irritation, and the cost of examining and surcharging packages must be considerable. Referring to the financial question, he said many advertisers preferred to use closed envelopes for advertising purposes, and many circulars now sent at the halfpenny printed matter rate would be sent in closed envelopes at a penny if the penny post were restored. A collective advertising scheme was being pressed forward by the general printing trade, and this would undoubtedly help the postal revenue.

Lieut.-Colonel H. Rivers Fletcher, past president of the Federation of Master Printers, and managing director of Daniel Bros., Ltd., Norwich, maintained that the most valuable concession to industry which could be made at the present time would be the reinstatement of the letter rate to four ounces for one penny. As illustrating the confusion in the public mind regarding postal regulations, he stated that during the last month his firm received 1,196 letters and postcards insufficiently stamped, and said the cost of examining and surcharging must be a serious burden on the postal staff. He also asked that the parcel post rates might be adjusted, and mentioned that the present rates are in some instances higher than passenger railway rates for short distances.

Mr. H. Chalk gave figures showing a remarkable falling off in the quality of postcards sold by a large publishing house, and also a great reduction in the quantity of publications sent by post since the increase in rates.

Mr. E. H. Dennis dealt with the grievance of the picture postcard manufacturers, and stated that they had been able to meet German competition by adopting mass production methods, but that owing to the increase in postal rates a smaller number of cards were now being sold, and different methods had to be adopted. A cable message had been received from New Zealand stating that the sales of picture postcards had increased over 25 per cent. since the reduction of the postal rates there.

Mr. A. E. Goodwin referred specially to the anomalies created by the discontinuance of the sample post. He quoted a letter from one large firm stating that they had reduced their printing orders by 50 per cent. in consequence of the higher postal rates, and he stated that letters had reached him from every part of the country supporting their contention that the reduction in postal rates would undoubtedly stimulate the whole trade and commerce of the country. The official printers for the Wembley Exhibition had sold several millions of picture postcards, but a large number of these had not been posted, and it would undoubtedly help forward the success of the Exhibition this year if the picture postcards of the Exhibition were sent broadcast, and a halfpenny post would undoubtedly help in this direction.

The Postmaster-General, replying to the deputation, said that, although the speakers had covered a wide area, he must congratulate them upon the way in which they had stated their case, and also upon their brevity. Although a number of questions had been dealt with, they all came back to the main point—a reduction in the postal rates; and it must be obvious to everybody that any reduction would cost something. He asked the deputation as to their opinion as to which of the many reforms referred to they considered the first and most desirable.

Mr. Isaacs stated the deputation were unanimously of opinion that the re-introduction of the penny post and the halfpenny postcard rate was the most important.

The Postmaster-General said it was true that there had been a satisfactory surplus this year, though not as large as they might have expected. They had, however, to consider the fact that their commitments were increasing; and in regard to telephone development they had to face a considerable capital expenditure to provide for the expansion of this service. In any direction in which they approached this question of postal reform they would need to go step by step. It had been urged that the Post Office accounts should be treated as a separate unit, and there was certainly a good deal to be said for that point of view. At the same time they must realise that at present the Post Office accounts are part and parcel of the financial arrangements of the country in general,

and therefore they could not expect him to anticipate the Budget statement; but he undertook to convey to the Chancellor of the Exchequer the views of the deputation. He was in close touch with the Chancellor of the Exchequer, and they might rest assured that the questions that had been raised would be carefully placed before him. He did not think it would be possible to institute special rates for picture postcards only, but the question of reverting to a halfpenny postcard rate would certainly receive consideration. He could not offer any hope of immediate action with regard to the sample post; and with reference to trap envelopes the report from the officials was to the effect that the adoption by many firms of the character of envelopes defined in the Post Office circular had led to considerable improvement

New Natsopa Development

Homes for Retired Workers

THE National Society of Operative Printers and Assistants have carried their wonderful scheme at Wellsboro' a step further by deciding to build six homes for aged members. This is the second part of a three-fold plan in the mind of Mr. George Isaacs and his colleagues.

First there came the bold and adventurous step of purchasing a beautiful estate of nearly 400 acres in the heart of Leicestershire, standing high above Bosworth Field, with a glorious stretch of noble country on every side, and the building of a Convalescent Home. Here men and women come, and in quietness and comfort enjoy the countryside with perfect freedom, without any of the tantalising restrictions so often associated with benevolent institutions. The Home is in the midst of well-laid-out grounds, which in summer-time must be a great delight, and have their own pleasures to offer even in the winter.

Then the remainder of the estate is farmed on sound business lines, and stock, produce, and even flowers and seeds are sent to market and make profitable returns.

Now comes the fulfilment of the second part of the dream. On February 17 foundation stones were laid of a block of six cottages, which when finished will accommodate six aged couples. The little houses are to be furnished and thoroughly equipped, and even rationed with all needful provision, and will offer a beautiful sanctuary to many who, having borne the heat and burden of the day, can enjoy the quietness and beauty of the countryside.

Following this it is the purpose of the Society to build a sanatorium for tubercular patients, and it is difficult to imagine more advantageous surroundings. The whole idea is big, visionary, and businesslike, and reflects high glory upon George Isaacs, who conceived it, and all who are associated with him in seeing it through.

The stone-laying ceremony was purposely kept a sort of domestic affair. More will be made of the opening of the homes, which are expected to be ready in July.

The Rt. Hon. J. H. Thomas, M.P., accompanied by about fifty officials and veterans of the society, travelled down from London for the ceremony, and the editor of THE CAXTON counted it a great pleasure to be invited to be one of the party.

We were motored to the Homes from Nuneaton, given a good, simple luncheon, such as is served to the residents every day, and then "Jim" Thomas, as he was affectionately called, well and truly laid the stone of the new block of buildings.

Mr. Bevan, the President of Natsopa, gave all the visitors a very cheery welcome, especially the "eighteen-eighty-niners," as the founders of the Association are called. He was quite sure these men had no idea how important the work would be which they initiated 36 years ago. Efforts such as they were making that day were attempts to repay them.

Mr. Isaacs presented to Mr. J. H. Thomas a mallet for the laying of the stone made out of oak grown on their own estate, beautifully carved and suitably inscribed. He then outlined the scheme which is so near his heart, and paid a great tribute to the loyalty of all associated with him in this work.

Mr. J. H. Thomas thought the thing they were doing that day was one of the most beautiful tributes to those who fell in the great war. It was a great thing to have a home like the one they were in to which their folk could turn from the sordid atmosphere of daily toil and feel a real sense of freedom. It would be a great thing to know that all toilers had equal opportunities. He himself was a 30-year-old trade unionist, and could therefore appreciate the work of the founders of their society. He remembered how much more difficult it was to do their work in those days. When he appeared before his employers for the first time as a deputation he was a fireman working twelve hours a day for 3s. Addressing himself to the question of why the working classes had not made greater progress, he suggested it was not because their opponents were cleverer than they or richer. It was because of the damnable jealousies which existed amongst them. Mr. Thomas paid a very gracious tribute to the work George Isaacs did as his private secretary, and congratulated the society on having a secretary so energetic and loyal to their interests and the cause of labour.

The thanks of the Society to Mr. Thomas were voiced by Mr. James Keep and Mr. Fred Quin, both of whom were founders of the Society.

After the ceremony visitors were conducted over the estate; some of us explored the barns, the stables, the piggeries, and the cowsheds of the farm, and after tea the party returned to London, happily content with a good day.

WALKER BROS. have arranged an Usher-Walker night on March 28 for a Bohemian concert at the Horns Assembly Rooms, Kennington, on behalf of the Printers' Pension, Almshouse and Orphan Fund.

Stamp Printing

By Mr. FRED. J. MELVILLE

UNDER the auspices of the London Central Districts Master Printers' Association, one of the winter series of lectures was given last month by Mr. Fred J. Melville, on "Postage Stamp Printing." Mr. R. A. Austen-Leigh presided. Following are extracts from the lecture:—

The printer had a share in the great postal reform of 1840 which gave us the postage stamp. It was largely due to the activities of Mr. Charles Whiting, of the Beaufort House Press, and Mr. Charles Knight, the publisher, that the proposals of Rowland Hill and others were formulated and given publicity. Their early proposals for stamps were more directed to envelopes and wrappers than adhesive postage stamps, and even up to the actual issue of stamps Rowland Hill pinned his faith to the envelope and wrapper, and was more than a little astonished—even disgusted—that the public took the tiny adhesive stamps at once to their hearts, and left the elaborate Mulready envelopes and wrappers to be scrapped.

When uniform postage had been approved by Parliament in 1839, the form the stamps were to take was still undefined. The Treasury invited suggestions from "artists, men of science, and the public in general," offering premiums of £200 and £100 for the best proposals. Out of the many suggested stamps of this period it may be interesting to record that by far the most practical and most numerous of those handed down to us dealt with that interesting process known as compound plate printing, or compound plate printing combined with embossing. This is the method still used for printing the patent medicine duty stamps at Somerset House, where the process has been in constant use for over a century. The patent medicine stamps printed in black and red at a single operation are familiar enough not to require description. The black plate is a brass plate on the upper level where the black ink rollers pass over it; below is a rising table on which is the red plate, between which and the upper plate are the red rollers. Both plates being inked, the table is raised, the red plate fitting into the open parts of the black plate at the moment of taking the impression.

The Treasury competition produced no definite results in the shape of stamps such as were finally adopted. Messrs. Perkins, Bacon and Petch, the steel plate engravers, had not submitted proposals, and indeed were under the impression that their famous mill and die process would be too costly, owing to their misapprehension as to the requirements. On being informed in December, 1839, that an inch would do for the stamps, they realised the possibilities of their process and set to work to engrave the first Queen's heads. By grouping 240 repetitions of the small Queen's head engraving—it was .9in. by .75in.—on the plate, they were able to produce our first stamps at a cost of 7½d. per thousand (exclusive of paper, which was supplied to them), and at a later stage the price dropped to 5d.

THE FIRST STAMPS.

The production of the first adhesive postage stamps in 1840 was little short of a miracle, for looking back over 85 years with the knowledge of some 40,000 different postage stamps which have been produced since, collectors point to the 1d. black and 2d. blue of 1840 as unsurpassed in simple dignity of design and excellence of execution. More than that, they have not been improved upon in any essential detail, other than the later invention of perforation. The intaglio-printed stamp still holds the pride of place for artistic superiority. It gives depth and tone of impression not obtainable in any of the other processes, and wherever the stamp presents a portrait, or view or kindred subject, the best pictorial results are obtained by this method.

EMBOSSING.

Embossing, which was the second process used in producing British postage stamps, has passed out of the range of practical stamp printing to-day, except for certain non-adhesive stamps, *e.g.*, stamped envelopes. Early experts at home and abroad regarded embossing as a strong point in the make-up of a stamp which could not easily be counterfeited. I do not think that embossing to-day would be regarded as offering any additional security.

LITHOGRAPHY.

A few years ago one might have been prepared to say that lithography as a process for adhesive stamps was obsolete, but in the light of recent events the contrary is proved. To-day lithography is used in some cases for overprints and surcharges, and since 1918 there has been a revival of the use of lithography for producing stamps in newly independent countries thrown on their own resources and suddenly required to produce their own stamps, *e.g.*, Jugo-Slavia, Fiume, Esthonia, and the Trans-Caucasian Republics. With the solitary exception of Fiume, they have not been good examples of stamp work, and have not served to commend lithography as a process suitable for producing stamps except in emergencies and in the less important countries.

TYPOGRAPHY.

Typography is, and is likely to remain for a good many years, the most extensively used method of producing stamps for great and populous countries where the consumption of stamps runs to many millions. The United States, Canada, China, and to a limited extent as yet, Sweden, are the chief exceptions. France began with surface-printed stamps in 1849, and has kept to the method for 76 years; the bulk of our British stamps has been printed typographically since 1880; the stamp output of Germany, Italy, Portugal, Holland, Denmark, Norway, Russia, Finland, Roumania, Czecho-Slovakia, Austria, Hungary, and Japan is mainly typographic, as also of our great possessions—India, Australia and South Africa and the Crown Colonies. I think it may be admitted without argument that the typographical stamp does not give the most artistic results.

OUR STAMP PRINTERS.

In this country we use about 8,000 millions of postage stamps in the year, and the printing of them is an important branch of the printer's busi-

ness. For a good many years it was almost a monopoly, and, whatever may be said for or against restricting special work of this kind to a particular establishment, it is recognised that Messrs. De La Rue & Co. maintained a uniformly high standard of typographic excellence throughout their contract. Philatelists know also that in the earlier years they devoted a vast amount of technical skill and inventive genius to the production of stamps which would meet all the peculiar requirements of security in tiny scraps of paper. Since 1910 the business has widened out, and we know that other firms have succeeded in producing surface-printed stamps of high typographical merit and in the vast quantities required. Messrs. Harrison & Sons, after a few months of difficulty, not all of their own making, produced work which was entirely satisfactory and superior to any typographical stamps produced on the Continent. Messrs. Waterlow & Sons, Ltd., have carried on since last January with complete success, and in an incredibly short space of time have obtained an output capacity for coils and booklets beyond the current requirements.

ESSENTIALS.

The essential requirements in a postage stamp to-day are the same as in the beginning. In the historic competition of 1839, to which I have already alluded, the Treasury stated the most important points as :—

1. The convenience as regards public use.
2. The security against forgery.
3. The facility of being checked and distinguished at the Post Office, which must of necessity be rapid.
4. The expense of the production and circulation of the stamps.

PAPER.

The paper is an important factor in securing immunity from forgery. It is supplied to the printer by the Government, and is of a cotton-rag basis, the linen-rag papers used for bond papers being too hard for stamp printing. A uniformly good quality of paper is important in maintaining the maximum of security, and economy in the quality of paper is to be deprecated. The watermark is no longer regarded as the protection against forgery which it was considered to be in earlier times. It is, however, a factor in the control of the manufacture of stamps, the watermarked paper having to be accounted for throughout, and no similar unwatermarked paper being permitted in the printing room. Once on a letter, the watermark in a stamp is not seen, but in the event of suspicion of forgery the absence of the watermark would be an important, if not absolutely conclusive, test. The register watermark has now been abandoned for the all-over or continuous chain watermark, a factor in the economy of paper costs, and a saving of labour at the printers'.

GUMMED PAPER.

The best typographical results are obtained by printing on paper after it has been gummed. This has presented difficulties in the past owing to the sheets curling at the press. In Russia, from early times, this difficulty was obviated by surfacing the paper, giving it a coating of a chalky nature to counteract the gum coating on the reverse. When chalk surfacing was adopted in England, it was for a different purpose, namely, to make it impossible to remove cancelling marks without destroying the stamp image. Curling is obviated here by the now familiar method of Messrs. Samuel Jones' non-curling paper. The plate-glazing, which gives the paper its polish, has also the effect of keeping the sheets from curling at the press.

DESIGN.

The designs of our present stamps vary, but are all consistent in presenting fine line effects with but little solid colour. I think the 1d. stamp is the best, and hope it will soon regain its pre-eminence with the restoration of penny postage. The lined effects do not make the printer's job easier; the ordinary printer would, no doubt, prefer more solids, but this is an additional factor towards security. The French stamps recently forged on an extensive scale had the solid background familiar on the Sower type of France.

INKS.

The inks used for our stamps are required to be quick-drying, and fast on exposure for six hours to the light of a mercury-vapour lamp. They must be free from lead or any poisonous substance, and must be insoluble in water, yet of such a character as to be absolutely secure against the successful removal of cancelling ink without material alteration of the colour. This problem of preventing the re-use of stamps is still agitating the authorities, and experiments have lately been made with chemically-prepared paper which would make even the removal of writing ink impossible.

Perforation is not only a convenience to the Post Office and the public; it is a great factor in security. To the ordinary man the perforation of paper does not at first glance appear to present any great difficulty. But good stamp perforating is obtained only by the proper use of elaborate and ingenious machinery. Curiously enough, there appears to have been little or no perforating of paper prior to its introduction for postage stamps. This process is full of complications which seemed to defy mechanics and engineers. Under present conditions for British stamps it requires the use of highly perfected machinery with extremely fine adjustment.

Consider a sheet of postage stamps, 240 set, and note the limited gutters left between the stamps for the perforation. These gutters are .0625in. in width, and the perforation holes with a diameter of .035in. have to fall wholly within the gutters. In the comb on a British stamp perforator, as used at Watford and Somerset House, there are about 650 pins, and, working to such small gutters, and on gummed paper highly sensitive to atmospheric conditions, micrometrical adjustments in every direction are necessary, and these are made to thousandths of an inch. There is not only the variation in paper to contend with, but often a slight irregularity or curve in the plate to be counteracted. This condition is more liable to occur in the plates of 240 set solid than was the case with the plates broken into two panels of 120 which have now been superseded to economise paper.

The perforation is best operated across the paper web, at right angles to the way the stamps are printed. The comb is a little more than 21 stamps long, and takes thirteen operations across to complete the sheet. In the thirteenth descent of the pins the spurs of the comb run off the sheet mar-

gin. The process would seem slow, but as many as seven or eight sheets are in the perforator at a time.

A DIFFICULT TASK.

Enough has been said, I think, to show how far from a simple typographic printer's job is the manufacture of our own stamps, and, while the business of stamp-printing is no longer sacrosanct, it can only be undertaken by large firms with great resources. In the combination of all the factors of paper, watermark, design, colour, gum and perforation according to specification lies the hope of security from forgery. The maximum of security lies in preserving the uniform identity of the genuine article; if genuine stamps differ one from the other, the good forgery will not be readily detected or easily proved. But, as I have said, we are furher protected here by the restriction on the distribution and sale of our postage stamps, which makes it difficult for anyone to dispose of counterfeits of our postal denominations on a profitable scale.

NEW PROCESSES.

To turn now to modern developments in other processes, attempts have been made over a long period to print from intaglio plates on dry paper, to eliminate the variable shrinkage of paper which has to be wetted down for taking the impression, and also to enable intaglio printing to be done on gummed paper. The Dujardin machine was the first of this kind to come into use for stamps. The Hoes built one for the newly-established Government works in Chile in 1914, and, so far as I am aware, it is the only one in use for stamps. In the circumstances of the production of stamps by a new method in a new country, possibly under difficult local conditions, and in view of the difficulty of getting definite information, it would not be advisable to judge the achievements of this machine from the stamps issued by Chile since 1915. There was a flatness about the early work that misled some of the philatelic chroniclers into describing the stamps as lithographed, but there has been a great improvement since then.

The Stickney machine is another matter. It has now been in use for some years in America, and for about four years in Sweden. The machine invented by Mr. Benjamin R. Stickney prints from recess plates bent to cylindrical form on rolls of dry paper. The inking and wiping are done mechanically, and the printed roll passes through electric drying cylinders which dry the ink. The roll passes on to a glass gumming cylinder and then through a steam-heated drying shaft about 20 ft. long. It is carried dry from this shaft to the perforator, and on to the cutting, slitting and coiling apparatus. They can be cut into sheets of 100, but at present the chief use of the machine is in the manufacture of coils. As if all these processes were not enough in one complex machine, they are now pre-cancelling the stamps in rotary fashion. The system of pre-cancelling is little known here, but it consists in supplying large mailing concerns with postage stamps already cancelled to save time and labour in the post office.

A machine performing all these operations rapidly—it is claimed that it performs 23 distinct operations—should have a future. It was claimed that it effected a 65 per cent. saving, or 280,000 dollars, on the stamps printed on it during its first year. A few years ago an effort was made to induce the British Government to adopt the Stickney machine for its stamp printing, but without success. And in its present stage it would not produce stamps to our stringent requirements.

To form the cylindrical plate, two flat plates are turned to semi-circles and joined to make a complete circle. On the United States and on the Swedish stamps we find at every seventeenth stamp a heavy line of colour showing where the ink has got into the join; the two plates make a circle of 34 stamps round the cylinder, ten or twenty stamps wide. The die, I understand, has to be engraved very deeply, and very considerable pressure has to be exerted by the cylinder to get the full impression on the dry paper. The stamps show a full millimetre difference in length from the stamps of like denomination printed from flat plates, which may be due in part to this pressure and to stretch caused by the tension on the roll. The impressions are smooth, and lack the full rich colour of the flat printed intaglio stamps. And although a wide gutter is left for the perforations, rather more than twice the width of the British stamp gutter, the perforations rarely fall quite evenly, and are commonly found cutting through the design. Still, perforation has never been a strong point in the American stamps.

OFFSET.

Very few stamps have been printed up to the present time by the offset-method, and these chiefly in times of emergency. On the raising of the penny postage rate in the States to 3 cents in 1917, the Bureau was put to a severe strain in producing a sufficiency of 1 cent and 3 cent stamps, and for the first time in the history of the postage stamps of the United States there was a departure from the intaglio method. They followed the same designs as the plate-printed stamps, but in each case an enlarged photograph was made and carefully touched up, and by the aid of the step-and-repeat machine a glass multi-negative of 400 set was made. The multi-negative served as the master-plate from which the zinc typographic plates were made, from which the inked impressions were taken off by the rubber cylinder and offset on the paper.

PHOTOGRAVURE.

Various forms of photogravure have been used in recent years for stamps, and this method appears to be gaining favour with foreign Governments for stamps. Bavaria and Czecho-Slovakia have used it in the past, but the latter only printed one special issue. Belgium gave us what is undoubtedly one of the finest modern stamp designs by photogravure, from multi-negatives by the step-and-repeat machinery of Lithotex invention. This was the 1919-20 issue, with portrait of King Albert wearing a steel helmet. This is as near the best intaglio work as anything I have seen in stamp photogravure. The multi-negatives were stepped up in London at Messrs. Eyre & Spottiswoode's, and sent over to the Enschedé's at Haarlem, where the stamps were printed. The Enschedés have just printed a special Dutch series by photogravure.

Messrs. Harrison & Sons have printed the Egyptian stamps for the last two years by photogravure, and they are handsome stamps, with a photographic likeness of the Egyptian King. The newly-equipped stamp factory of the Egyptian Government under the Survey-General is also going to use photogravure, and has installed the Lithotex

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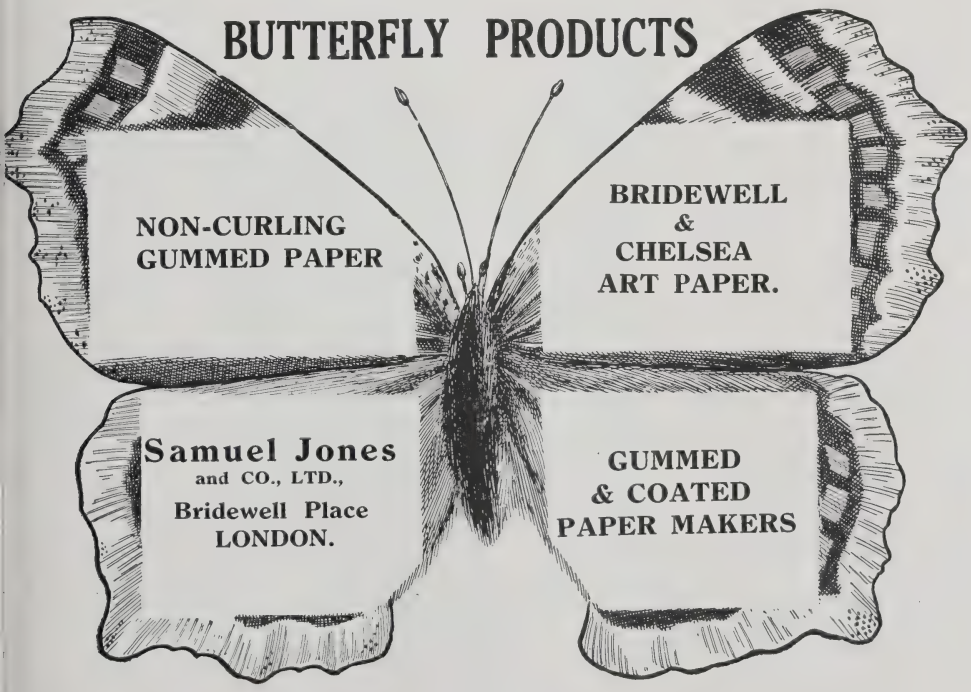

plant for its plates, and Grover comb perforators. Another country hitherto chiefly devoted to intaglio work is Salvador, which has just been provided with photogravure stamps by Messrs. Waterlow & Sons.

THE STEP-AND-REPEAT MACHINE.

Mention of the Lithotex plant brings me to the important contribution of the step-and-repeat machine in all current processes of stamp manufacture. Its uses in lithography and offset are well known to you, and I have referred to its use in photogravure. It is perhaps not so generally known that, with the perfecting of the associated processes, it is going to be as useful in typographical and intaglio work. In the matter of securing perfect alignment across and down the plate of stamps it produced entirely satisfactory results when first introduced here by Messrs. Miller and Motley about fourteen years ago. They made some plates for me in 1912 of an exhibition stamp, designed to demonstrate the modern requirements of our postage stamps, and the same subject was treated by what was then called "the Printex" for surface-printing (240 set) and for recess-plate printing (120 set). The results were very good, but the process is more scientifically exact than it was twelve years ago. The exposures for the multi-negative are automatically time-controlled, and with an improved instantaneous shutter every exposure is exactly the same. Improvements in standardising the sensitising of plates, and elec trical etching have all contributed to eliminating the factors which left loopholes for minor variation.

The plate making for our typographical stamps at the Royal Mint is at present a slow and costly business. Our National Health and other insurance stamps have been successfully printed typographically from plates made by the Lithotex process. It should be mentioned in a general survey of processes of stamp-printing that ordinary process blocks have been used, generally in remote countries. A few years ago, Uruguay gave us a set of bi-coloured stamps, the frames printed from ordinary line blocks and the centres from halftones. Kishengarh and Soruth, feudatory states of India, have also printed some stamps from halftone blocks. Since Poland came into her independence and is producing her own stamps, she has used the photo-zincographic method, and is probably doing so to this day. The stamps are not to be held up as models in a country where the typographic arts have attained the high level they have reached in Great Britain.

In conclusion, I would refer to the tendency that is so prominent to-day—the ambition of foreign countries and the colonies to print their own stamps instead of having them well and truly printed in this country where you know the art so well. Of recent instances, Ireland is the only one that has made a really good job of it, but there the work is in the hands of men who had extensive experience in the printing of our British stamps. South Africa's attempts have been much less satisfactory. India is preparing to print out there, and is pretty sure to encounter considerable difficulties. Egypt will soon be printing her own stamps by photogravure, and the Survey-General of Egypt has some experience of stamp-printing for Palestine and the Hejaz. But, on the whole, I think the countries where native labour has to be relied on will do well to send their stamp and security printing to the Home Country, where it can be done with the greatest efficiency and the safest control.

A Sumptuous Book

NORFOLK'S tribute to her valiant sons who fell in the Great War has yet to take material shape, but a beginning has just been made with a Book of Remembrance enshrining the names of those Norfolk soldiers and sailors who made the great sacrifice. This, it is hoped, will eventually find a worthy resting place in the restored Lady Chapel which has yet to be erected in accordance with the original scheme promulgated by the authorities of Norwich Cathedral. This Book of Remembrance is a magnificent specimen of present-day book art, and redounds to the credit of its designer, Mr. Joseph J. Hall, of Great Yarmouth.

The volume, which measures 18½ in. by 16 in. by 4 in., is bound in full garter blue levant morocco, with raised bands and gold tooling on the back, lined blue calf inside covers, with gold toolings and wreath design, solid gold burnished edges, and two gilt clasps at the fore-edge. On the front side are eight gold tooled wreaths and inner and outer triple rule borders, enclosing the arms of the diocese, and an inscription in specially designed and engraved Roman lettering as follows:—"Norwich Diocese.—The Great War, 1914-1918. Book of Remembrance." The designing, illuminating and illustrating has taken Mr. Hall over two years to execute. The binding and gold blocking have been capably carried out by Messrs. Jarrold & Sons, Ltd.

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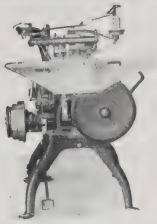

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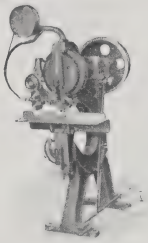

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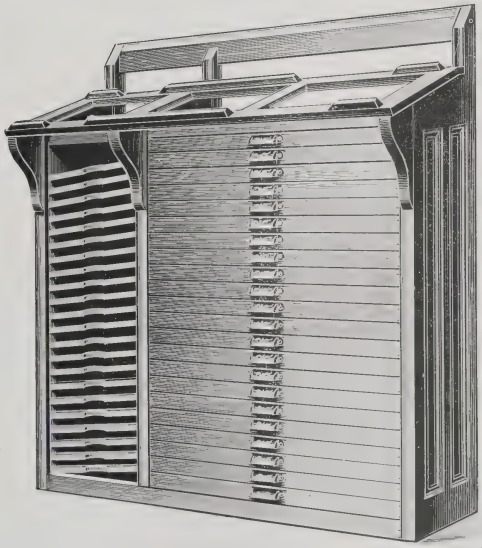

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CHAPTER V.

Ventilation, Heat, Sanitation and Safety.

ADEQUATE ventilation of workrooms is a legal necessity, the Factory Acts requiring that sufficient ventilation must be provided and maintained. It is also required that measures be taken to maintain a reasonable temperature. Many printing establishments make no attempt to conform to these rules, and the health of employes is endangered as a consequence. Employes themselves are not always appreciative of much that is done for them under the heading of hygiene, but an enlightened management would insist on conforming to certain principles which are known to be correct. One of the chief causes of chest trouble and a foundation for phthisis is the sudden emergence from a close stuffy atmosphere into the fresh cold air of the outer street, yet the common experience is that quite the majority of printers strongly object to open windows or an inlet of fresh air in cold weather. In many cases the ground for objection is that the only means of admitting fresh air is in the form of a draught which inevitably leads to ailment. Unfortunately, it is a fact that employers have given little thought to an adequate and efficient system of ventilation, and have simply left the workers with the alternative of a fetid atmosphere or an ill-directed cold draught. Faultily designed window frames and skylights cannot by any stretch of imagination be considered to furnish the adequate means of ventilation required by the Act. The conditions of adequate ventilation are that there should be an inlet and outlet, that the incoming air should, if possible, be brought up to a suitable temperature, and should enter from a position and arrangement which will prevent draughts, and that the ventilation should be distributed evenly throughout the rooms. A standard of ventilation laid down by the Home Office is that there should be six changes of air per hour. Still air speedily becomes foul or stagnant, constituting a serious menace to health; cool, clean, moving air is a protection against ailment and disease.

In choosing between a natural or a mechanical system of ventilation, the printer must obviously be guided by the structural character and the position of his establishment. Basements and low premises surrounded by high buildings must inevitably suffer from the obstruction of the passage of fresh air, and must necessarily have recourse to mechanical methods of ventilation. Old buildings lacking inlets and fitted with fixed windows, or buildings with skylights or roof ventilators without corresponding inlets, may require either slight structural alteration for the introduction of air by natural means, or an entirely mechanical system might be devised. The rough and ready method of creating an aperture and inserting a fan in any haphazard position does not constitute ventilation, and may easily do more harm than good. If there is to be a scheme, it should receive thoughtful consideration, and in order to ensure efficiency expert advice should be sought.

Natural ventilation is furnished by windows, skylights, doors, chimneys, and odd crevices or apertures. Windows, crevices, and doors provide the inlets, while flues, skylights and roof ventilators furnish the outlets. The best type of natural ventilation for one-floor buildings erected with span roofs is the double-sided louvre ridge, fitted with adjustable shutters for regulation according to the direction of the wind. Without an efficient inlet, however, the louvre ridge loses its value. The best type of natural inlet is that provided by sash windows fitted with an arrangement to ensure an upward flow of air without draught. Most natural systems are open to the objections that draughts are difficult to avoid, the temperature of the incoming air cannot be controlled, and on still days the air within the rooms has no movement, and therefore tends to become foul and unhealthy.

Of mechanical system, the approved one for use in the printing industry is the system of exhaust ventilation, depending on the natural inflow of air from arranged inlets, and the forced extraction of used air by means of propeller fans. The fans should be placed near the floor level, away from doors or openings which act as air inlets, otherwise the fan will waste its energy by working on this supply of air. The efficiency of the propeller fans depends upon the room receiving an adequate supply of fresh air, freedom of action of the propellers, clear facilities for discharge of exhaust, and protection against the counteraction of outside wind or air on the discharge.

The air supplied to the rooms through the natural inlet must be clean and pure. It is sometimes necessary to erect a shaft extending upward, or along, to a source of pure air, but, whatever method may be employed, the cardinal fact remains that exhaust systems are of very little use unless the inlet of air is both adequate and efficient.

HEATING.

The heating of printing and allied departments is an important matter, especially in regard to its relation to output. Compositors cannot pick type quickly if their finger ends are numb, nor can a mono. or lino. operator tap the keys with his accustomed dexterity. In the machine-room ink troubles arise, and feeders find difficulty in handling the sheets. It is quite safe to assume that for the first hour or two in an inefficiently-heated factory fully 50 per cent. of normal production is lost on cold winter mornings. The appropriate temperature for a printing office is 65 deg., and the minimum standard accepted by the Home Secretary is 55 deg. F. As a matter of fact, 65 deg. also corresponds to the efficiency temperature for paper and ink. The temperature should be steadily maintained throughout the working hours, an object which can only be achieved by the installa-

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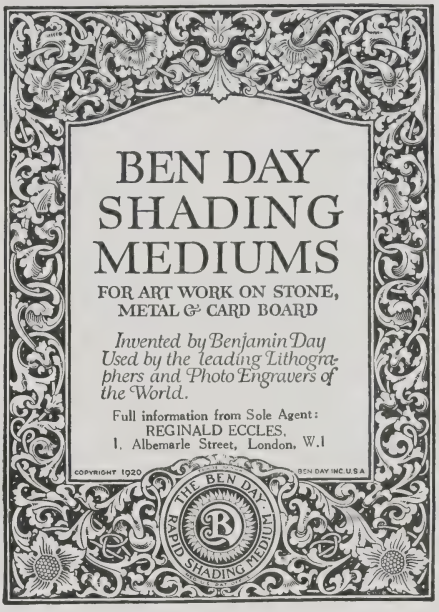
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tion of an approved heating system under the control of a competent person whose duties would include the recording of heating data. Boiler fires should be maintained overnight by the usual economic methods, and the stoker should require to be in attendance at set hours before opening and after closing down the works. Spasmodic heating is not only extravagant and inefficient; it also leads to direct loss of production and injury to health.

Of the various methods of heating (so far as works departments are concerned), open fire or gas heat is too costly, and vitiates the air whilst yielding a minimum degree of heat. Electric radiators are beyond consideration owing to cost and relatively low heating power. The approved method is undoubtedly hot-water heating through overhead pipes. The advantage of overhead pipes is that they do not affect the floor space, are more economically installed, and the position corresponds to the requirements of the ventilation system. The direction of the movement of air under an approved system of ventilation is downward, the inlet being placed above and the exit, *i.e.,* the extraction fans, working near the floor level. Under such circumstances, the heat from pipes placed near the floor would be drawn away before it could permeate the atmosphere of the room. Further, the incoming air, by encountering heat at the onset, has the chill removed before it reaches working levels. A more elaborate and efficient method of conditioning the incoming air is to instal radiator ventilators through which the outside air must pass during its admittance.

There is another aspect of atmospheric condition which is rapidly coming to be considered a potent factor in the efficient control of large colour-printing establishments, namely, humidity. It is well known that paper varies according to the conditions to which it is exposed. A vast amount of expense is incurred and production much impeded by what are commonly termed paper troubles, especially in chromo-lithographic establishments. Paper-hanging, curing machines and various contrivances are introduced and resorted to in order to counteract irregularities which may occur in either paper character or atmospheric conditions. Badly-regulated or totally-neglected systems of heating and ventilation are a main source of this trouble and expense, despite which there have been very few attempts in the printing trade to tackle the problem at its source of origin, namely, atmospheric condition. Paper store-rooms and printing departments should be as nearly uniform in condition as possible, and a system of control is the only way by which regularity and uniformity can be maintained. Heating diminishes the humidity of air by raising its point of saturation. A fall in the temperature releases the suspended moisture, which then acts as damp. Under natural conditions the amount of free moisture varies as the thermometer rises or falls. To introduce stability and control an efficient heating and ventilating plant should be augmented by a humidifying system, in which, by means of a suction pump, filtered water is forced along an overhead series of pipes, to be ejected from the humidifiers in the form of invisible mist. The mist or spray is capable of regulation to any degree of fineness, and a series of eight to twelve humidifiers would be ample for any large department. The ejected moisture is so fine that, even if located directly over bright steel, no rusting will ensue. The condition of the atmosphere is maintained to a uniform degree of heat, freshness and humidity by the aid of a hygrometer under the charge of the engineer responsible for the heating, ventilating and humidifying plant. The hygrometer (a form of wet and dry bulb thermometer) enables the temperature and moistness of the air to be calculated and recorded at set intervals, and permits variations in condition to be instantly detected and remedied.

SANITATION.

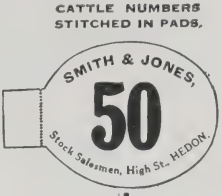
Every printer must comply with certain requirements set down by the Government, and to this extent sanitation of a correct order is ensured. Separate and adequate lavatory accommodation, washing troughs, drinking water and containers, bronzing closets, limewashing, etc., are specified in the Acts now in force. Equally important phases in sanitary efficiency are not scheduled, and can only be left to the printer's discretion. Generally speaking, the trade has not a good name so far as workshop hygiene is concerned, and, excepting for a few of the higher-class and more progressive offices, very little effort is put forward by printers to introduce and maintain a reasonably high standard of cleanliness. From the purely material point of view, cleanliness is a paying proposition simply because it increases output. Quite apart from the mercenary aspect, it is incumbent on every employer to care for the welfare of the workers. In the U.S.A. the operatives safeguard their own welfare by the introduction of a clause in their union rules which stipulates an extra 10 per cent. on wage in unhealthy shops as compensation for the health risk involved.

In the re-organisation of the printing industry in this country, joint committees are now established for the purpose of considering health problems. So far this is a great step forward, but unless the organisation extends its influence into every printing office in the country, the task of establishing a new standard of hygienic efficiency will never be completed. In every large office there should be a Shops Committee, composed of representatives of the labour and administrative sides, whose functions would include a close super-veillance over conditions affecting the standard of health. It is computed by competent medical authority that phthisis is especially prevalent in the composing department of the trade. From the health point of view, the composing-room may be the most or the least efficient according to its organisation and equipment. Under antiquated conditions the department is converted into a dust trap, and the ultimate release or removal of the dust constitutes a positive menace to health. The open case and the bellows are one main source of lead poisoning, a malady which in its worst form becomes fatal, and is, in its mildest form, a pioneer of phthisis. The average number of lead-poisoning cases in the printing trade is in the region of fifteen to twenty, some of which are fatal.

Investigations undertaken by British and German authorities have revealed the following facts:

Floor dust contained			11.51	per cent.	of	lead.
Shelf	,,	,,	6.59	,,	,,	,,
Case	,,	,,	14.43	,,	,,	,,
,,	,,	,,	17.27	,,	,,	,,

Lead poisoning results primarily from the inhalation of fine lead dust, and it will readily be appreciated that the creation of a cloud of case dust



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consequent upon the use of bellows involves a very serious risk of danger to health. The mere picking of type from dust-ridden cases is sufficiently dangerous to the operatives concerned, especially if due washing precautions are not observed before partaking of meals.

The dangers of lead poisoning are reduced to a minimum by the installation of dustproof cabinets and racks, adequate (warm water) washing facilities, and accommodation for meals outside the department. Dust removal from cases should be conducted on the suction principle, using either hand, pneumatic or electric suction appliances. Floor sweeping should, for preference, be performed by similar methods, particularly in the composing department.

Throughout the factory floor sweeping should be performed daily, preferably at the close of the day Dust contains myriads of germs and bacteria, and the folly of dry sweeping is only equalled by the use of the bellows on the compositor's case. Water sprinkling is very little of an improvement, and commonly implies either the production of mud or the creation of dust clouds. Moistened sawdust, containing a small proportion of disinfectant fluid, actually keeps the dust down and acts as a steriliser, but even better than this is the use of the patent substances specially prepared for floor sweeping and disinfecting.

A periodical overhauling of the rooms should be made, the floors being mopped, all odd corners and spaces thoroughly cleansed, and tables and benches cleaned down. Shafting and driving pulleys attract and collect a large amount of dust and dirt, which should be removed at regular intervals. Receptacles for waste paper should be arranged at convenient positions, and in the machine-rooms each machine should have its basket. Floor littering should be made an offence, and the employes trained to regard it as such. At the close of each day all the waste should be removed and bagged, or rather baled. Bags of waste about a printing office are unsightly, insanitary and dangerous. The filling and tying up is a time-wasting process. No progressive office would entertain bagging as an alternative to the various types of baling press now in existence.

For the sake of general light and cleanliness, the window-cleaning contract should specify (in industrial cities) six times per year and lime-washing of the walls should be performed each year. The amount of light reflected by the whitened walls brightens up the rooms, while the disinfectant nature of the lime destroys germs and freshens the atmosphere. In point of law lime-washing and paint-cleaning must be undertaken once every 14 months, and paint-renewing once every three years.

The Bronzing Regulations are well enough known not to call for comment here. In every modern, well-conceived factory, separate accommodation is now provided for storing clothes, preparing food and taking lunch or other meals. The Shop Committee should make a point of regularly inspecting the canteen, the preparation of meals, and the state of lavatories. In regard to washing accommodation, the printers of this country have much to learn from American offices, where the value of adequate provision is thoroughly realised. Many hours of labour are lost each day in instances where limited accommodation causes employes to vie with each other for the early wash.

SAFETY.

Accidents in printing offices are mainly caused by unfenced machinery or shafting, floor obstacles, projections, or inefficient lighting, undue exposure to fire risk, and personal carelessness. Granted every reasonable precaution, accidents will happen, and their occurrence must be provided for. Some one person should be appointed in charge of the first-aid cabinet, and a record should be kept of all accidents, however trivial. The cabinet should be fitted out with a comprehensive range of medical necessities covering ordinary ailments as well as casualty cases. Large offices are not now considered complete without the first-aid room and medical attention on the spot.

Having provided efficiently for accidents, the next thing is to reduce their number to the absolute minimum. Machinery must, from legal necessity, have its exposed moving parts guarded. The guards or fences are best of a fixed character wherever possible, especially for belting. Employes are not sufficiently careful of their own safety, and many accidents are the result of unused or misplaced guards. Upright guards should either have solid foundations or be fixed to the floor. For lightness and space economy, wire guards are to be recommended. Motors are best encased in wire frames, wooden covers embodying a certain amount of fire risk, in addition to inherent clumsiness and obstruction.

The relation between inefficient artificial light and accidents has been referred to, and the fact may be merely stressed here that accidents in contact with moving machinery most frequently happen under the influence of bad light or excessive glare.

Fire safety is perhaps the most essential of the many safeguards which must be adopted in printing offices. The ideal modern building of fireproof material, fitted with armoured-steel fire-resisting doors, automatic alarm and sprinkling apparatus, is the best protection against fire. Unfortunately, most of the existing types of building are anything but fireproof in their nature, and the utmost the occupier can do is to cover his risk well and introduce all the safeguards possible. Apart from accidents and sheer carelessness, the chief causes of fire include heat from gas engine, exhaust pipes and slow-combustion stove pipes, spirit vapours contacting with naked flame, defects in electric wiring and spontaneous combustion (as in the case of heaped-up oily rags).

The precautions taken by the intelligent printer (including those of legal necessity) would be the election of a person or persons in each department responsible for that department, and the formation of a fire-committee constituted by these persons under a nominal head. Fire drill would be practised at set intervals with occasional sham alarms (the workpeople having been notified previously). Fire buckets, supplemented by patent extinguishers and sand, would be provided in each department, and the departmental fireman would be held responsible for their efficient maintenance. In large establishments hose and hydrants would be installed. Fire exits and escapes would be provided and kept clear, and the escapes would be fitted with high side-rails. Floors would be kept clean and free from refuse. Naked lights would be forbidden in use. Oil drippers and trays would be installed at every point where the probabilities of falling drops of oil were manifest, and also beneath all

machines. Galvanised iron bins would be provided as receptacles for oily rags and refuse. Paraffin or other inflammable spirits would be stored under special supervision. Smoking would be rigorously repressed. Gas and open fires are especially dangerous in the workshop, and should give way to electricity and steam or hot-water heating.

According to the efficiency of the precautions against fire, the assessment of risk will be adjudged more or less in favour of the occupier. Insurance companies will grant extra concessions in cases where automatic sprinklers, alarms, or other approved appliances have been installed. Automatic sprinklers are perhaps the most efficient and efficacious reagents against fire, but they are also the most costly. In many instances they have restricted to an infinitesimal amount damage which would otherwise have totalled to enormous proportions. The installation of sprinkling apparatus comprises a network of pipes along the ceilings of the various rooms, connected up with the water supply. For every 100 square feet of area a nozzle is provided, plugged with a small marble. The marble is held in position by a strut secured by solder metal with a melting point of 150 deg. F. In the event of an outbreak of fire the temperature rises and the solder melts, releasing the marble and permitting an immediate flow of water in the locality. The spread of the water is assured by an ingenious contrivance which converts it into a wide volume of spray. In addition to the water action, automatic sprinklers also give an alarm and indicate the locality of the outbreak.

The ordinary automatic fire alarm works on the principle of expansion by a rising temperature. A number of detectors are affixed at convenient intervals and connected up with an indicating board at the entrance to the building, or even direct with the fire station. In the event of fire, the expansion of a metal strip closes an electric circuit, and causes the alarm bell to ring continuously, at the same time indicating the point at which the fire has started.

Chemical extinguishers act upon the basis of oxygen-exclusion. Fire depends upon an available supply of atmospheric oxygen, and the object of the extinguisher is to propel carbon dioxide gas on to the outbreak for the purpose of damping it down. The sulphuric acid and the bi-carbonate of soda in the apparatus unite to form sulphate of soda and carbonic acid gas, with water. Small outbreaks are immediately suppressed under the action of this preparation.

Having taken every reasonable precaution against fire, the printer must still assume fire to be a contingency to be thoroughly insured against. To meet the requirements of the insurance company, when claiming, the value of every item destroyed must be proved. The onus is upon the printer, and his only reliable evidence is an up-to-date inventory compiled by an independent and authentic professional. The inventory should be itemised in full detail and classified by departments and floors. Exhaustive summaries should classify the component parts, giving departmental analysis and aggregate total values of machinery, motors, shafting, belting, furniture, fixtures and fittings, tools and utensils, type, designs, standing matter, blocks, stock, etc., etc. Three copies of the inventory should be issued, one being held by the valuer, one by the printer, and a main summary by the insurance company, whose acceptance of the figures should be secured. A rate of depreciation could be agreed upon, but the printer would necessarily keep his inventories posted up to date with altera-

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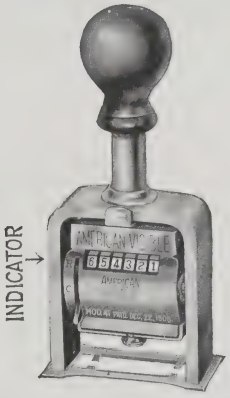

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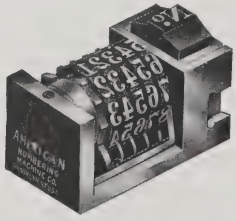

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tions and additions. The insurance policy itself must be in such terms as will clearly account for everything for which the printer is liable or responsible, including telephone installations, goods held in trust, buildings, work in progress, standing matter, designs, etc. In the event of a fire, loss of profits over a specified period must be assumed, and rent and other expenses during the period of reconstruction should be fully covered. Much subsequent worry, trouble and loss would be avoided if clear and adequate arrangements were made at the time of carrying out an insurance policy. The revolution in values brought about by events of recent years has negatived the utility of any data compiled at an earlier date, and it is of vitally serious import to the trade that modern risks and modern values should be met and covered by modern figures.

Messrs. E. J. Arnold & Sons, Ltd.

On Friday evening, February 13, Messrs. E. J. Arnold & Sons, Ltd., printers, stationers and educational publishers, entertained staff and factory employes to a social evening in the Salem Institute, Leeds. About 450 sat down to tea, but, unfortunately, owing to influenza and various other circumstances, over 100 were unable to be present. Tea over, Mr. W. H. Webster, on behalf of those assembled, thanked the company for their hospitality, after which the directors (Mr. E. G. Arnold and Mr. H. Wood) expressed the pleasure they felt at meeting their fellow-workers under such enjoyable circumstances, and also gave some interesting details of the extent and ramifications of the business. The party then passed to an adjoining room, in which a short but excellent concert was given. A whist drive and dance followed, between 130 and 140 taking part in the drive.

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All Editorial Communications should be addressed to the Editor, THE CAXTON MAGAZINE, Avenue Chambers, Southampton Row, London, W.C.

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THE CAXTON MAGAZINE
A PROGRESSIVE ORGAN OF THE GRAPHIC ARTS
Edited by A. E. OWEN-JONES

The Printing Trade Dispute

Settlement Made at 5.45 a.m.

THE most unfortunate dispute in the printing trade, which gravely threatened to involve not only our own industry, but that of the country into no end of difficulty and dislocation, ended after patient and protracted conferences at 5.45 on Friday morning, March 27. The case for the employers was presented by Colonel H. Rivers Fletcher and Mr. A. E. Goodwin, and that for the Union by Mr. A. Harraway and Mr. T. Newland. The difference had such an insignificant beginning, and grew to such alarming possibilities so quickly that comparatively few printers outside the official circle of the Federation knew what it was all about, and even those few had difficulty in understanding why the whole industry had become involved in a small dispute affecting a class of worker and a type of machine they had scarcely heard of and never employed.

Such things are best forgotten. Yet for the sake of trade history we must give some account of how the disturbance arose.

For several months negotiations have been taking place between the Federation and the National Union of Printing, Bookbinding, Machine Ruling and Paper Workers for the purpose of fixing rates on certain very special machines used in the bookbinding industry, both for London and the provinces, as all wages and conditions in this industry are governed by the National Agreement. It should be understood that an agreement is in existence governing the rates to be paid on similar machines used by firms mainly engaged in the production of periodicals in London, but such rates have never been applied to the cloth or publishers' binding industry either in London or the provinces.

While negotiations were in progress a few members of this Union employed at Messrs. Greycaine's works in London demanded to be paid according to the above last mentioned agreement, and despite the unanimous recommendations of two meetings of the Conciliation Committee of the Joint Industrial Council, which consisted of an equal number of employers and trade union representatives, these men refused to continue to work the machines unless their demands were acceded to. On March 6 this action resulted in a complete stoppage of these works employing over 400 workers. The Chairman of the Joint Industrial Council, as directed by the Conciliation Committee, called the attention of the employers and the Union to the constitution of the J.I.C., which provides that no aggressive action may be taken until any subject in dispute is referred to a full meeting of the Joint Industrial Council, and accordingly the firm re-opened their works, but the men refused to return.

Messrs. Greycaine are members of the London Master Binders' Association (which is affiliated to the Federation), and after a full meeting of the Joint Industrial Council, when every effort made to reach a settlement had failed, the other members of the London Master Binders' Association gave notice to the binder members of the Union that, unless the workers at Greycaine's returned to work while negotiations were resumed, they would close their factories on March 20. On Tuesday, the 17th inst., the Union issued instructions to their members employed by members of the London Master Printers' Association to tender strike notices to expire on March 24, thus extending the dispute to a section of the printing industry which is not directly concerned. The Federation Labour Committee met on Tuesday, 17th inst., when the whole position was reviewed, and it was stated that there were many other instances of aggressive and unconstitutional action taken or threatened by this Union.

The following resolutions were unanimously adopted by this committee:—

(1) That this meeting of the Federation Labour Committee endorses the action of the Negotiating Committee.

(2) That this meeting of the Federation Labour Committee, having heard the account of the origin of the attack upon the members of the London M.P. Alliance made by the National Union of Printing, Bookbinding, Machine Ruling and Paper Workers, is of the opinion that it is unjustified, and that it is an attack on the Federation, and should be resisted by the whole weight and force of the Federation by united action.

(3) That this meeting of the Federation Labour Committee recommends those houses in London which have received notices from the N.U.P.B.M.R. & P.W., and which will be unable to carry on their other departments without the members of the N.U.P.B.M.R. & P.W. to notify their other employes that unless the notices are withdrawn by the N.U.P.B.M.R. & P.W., it will not be possible to retain their services.

(4) That this meeting of the Federation Labour Committee recommends the Federation to call a special Council meeting to consider the steps to be taken in support of the London Master Bookbinders and the London Master Printers' Association against the aggressive action of the London branches of the N.U.P.B.M.R. and P.W., and to recommend the Council to instruct all members of the Federation to give notices as early as possible to such members of the N.U.P.B.M.R. & P.W. as they employ.

(5) That this meeting of the Federation Labour Committee recommends the calling of special meetings of the Alliances or group meetings or Association meetings in order that our members may be fully informed of the situation, so

that the Federation Council may be in a position to take definite action.

Following this meeting, attempts were made to call in the services of the Ministry of Labour to effect a settlement, but this was wisely resisted, for the Joint Industrial Council exists for such conciliatory purposes, and it was felt was well able to continue the negotiations.

Unfortunately this decision came too late to prevent the beginning of the retaliatory strike which the Bookbinding and Paper Workers' Union had declared against all the general printers and periodical printers of London. The lock-out affected between 5,000 and 6,000 workpeople and seriously interfered with the publication of most of the weekly periodicals usually published in London on Friday mornings.

On Wednesday, March 25th, the officials of the Joint Industrial Council of the printing and allied trades met under the auspices of the Conciliation Committee of the Council. Those concerned in the discussions were the Emergency Committee of the Master Printers' Federation and Mr. C. W. Bowerman and Mr. Holmes, of the Printing and Kindred Trades Federation, and they were together in consultation with Mr. G. Harraway (the President) and Mr. T. G. Newland (the Secretary), of the Union of Printing, Bookbinding, Machine Ruling, and Paper Workers.

The Conciliation Committee sat with wonderful patience on Wednesday, and again on Thursday, and through the night until Friday morning.

The following are the terms of settlement:—

"It is agreed by the representatives of the Master Printers' Federation and representatives of the N.U.P.B.M.R. & P.W. that the acceptance of the following proposals carries with it an undertaking that the employers' organisations and the Union nationally and locally, and all their branches, sections and chapels shall respect the constitution of the Joint Industrial Council, and will take no aggressive action of any kind until Rule 26 of the J.I.C. dealing with disputes is fully complied with. It is also agreed that in future all negotiations for the binding industry shall be national, and that if any agreement is made for extra rates or any special conditions accepted over and above the existing minimum rates, these shall be flat rates for the whole country, London and the provinces.

*"It is agreed that the accompanying schedule of rates for special power machines shall be embodied in the National Agreements designated No. 5, for bookbinders and machine rulers, and No. 4 Male Members' Agreement, N.U.P. & P.W.

"In the event of a man being put to operate any of these machines without previous experience he shall be paid half the increased rate agreed upon for the machine during the first six months, after which he shall be paid the full rate.

"There shall be no change in the staffing of folding machines in consequence of this agreement, and in cases of dispute as to the pay of operatives on folding machines no alterations shall be made until the cases have been considered by the Joint Reference Committee and failing agreement by the Conciliation Committee of the J.I.C.

"There shall be no victimisation on either side.

"That the finding of the Joint Industrial Council Conciliation Committee on 24th February, 1925, on the Greycaine Book Manufacturing Company's case be carried out."

It will be noted that the last paragraph in the memorandum of settlement is the most important, and that the original decision come to by the Conciliation Committee of the J.I.C. on February 24 is accepted.

*This schedule was not available at the time of our going to press.

Exhibition Notes

AT a meeting of the Honorary Advisory Council on March 27, Mr. F. W. Bridges presented the following programme of the opening ceremony by the Prince Henry on May 16:—

11.20 a.m.—Members of the Council assemble in the entrance hall.

11.30 a.m.—The Prince Henry arrives, and is received by the President of the Exhibition, Mr. W. H. Lock (Chairman of the Council), and Mr. W. I. Burch (Vice-Chairman).

11.35 a.m.—Members of the Council are presented to H.R. Highness.

11.40 a.m.—Prince Henry will make a tour of the Exhibition.

12.30 p.m.—Opening ceremony.

RAILWAY FACILITIES.

It has been arranged by the London, Midland and Scottish group of railway companies that special excursions will be run to London several times during the Exhibition from many of the most important centres served by these railways. Some of these will be for a day at single fare, and others from more distant places, for travel one night and return the following night at a fare and a third. It is hoped that similar arrangements will be made by the other railway groups. These arrangements will be published fully in the next Bulletin.

DATES FOR SENDING IN EXHIBITS.

All specimens and layouts for competition at the Exhibition must be sent in to

MESSRS. F. W. BRIDGES, LTD.,
Avenue Chambers,
Vernon Place,
Southampton Row,
London, W.C.1.,

not later than May 4th.

THE NEXT BULLETIN.

The next Exhibition Bulletin will be issued immediately after Easter, which will contain the latest information available, together with a complete list of exhibitors and a description of exhibits not already published.

INTEREST.

Interest in the Exhibition continues to grow. There is no dobut at all that this show will far exceed in interest all which have gone before it. It is especially gratifying to know that overseas visitors are coming in large numbers, and official representatives have been appointed to attend from as far afield as Sydney, Australia and South Africa.

Machine Gravure

By R. B. FISHENDEN, M.Sc. (Tech.)*

INTAGLIO printing is a process by means of which the impression on the paper or other material is produced from incised or engraved cavities filled with ink. In letterpress work, such impression is derived from a raised surface, while in lithography both the printing and non-appearing portions are on the same level. Of the three processes mentioned, intaglio is, without question, the most interesting.

The artist etcher using the intaglio method can produce results of incomparable beauty, while the same principle in commercial printing, and in combination with photography, provides the means to produce results of exquisite quality at speeds, even on cheap newsprint, exceeding those of the newspaper rotary. In addition, the process is equally applicable to the most advanced developments in colour printing.

Copperplate etching, aquatint and mezzotint, are all intaglio methods, and are usually described as the processes of the artist etchers. Think for a moment of a vigorous etching by Brangwyn: the lighter tones are represented by strong lines, but these lines are not equal to the strength of those defining the shadow portions. An etching by Whistler, on the other hand, will be found to have the most delicate hairlines in the lighter tones; or again, a mezzotint by Cousins or Turner will show smooth tones possessing an infinite variety of gradation.

In visualising the beauty of a mezzotint, from the rich velvety shadows to the minute crisp high-lights, it is well to remember that these effects can be produced only by intaglio processes, just as the varying strength of line in the etching can be obtained in no other way.

CHARACTERISTICS OF INTAGLIO IMPRESSIONS.

In order fully to appreciate the characteristic quality of intaglio printing, it is necessary to understand the essential differences between that process and letterpress; and litho and litho-offset work. In both letterpress and lithographic methods, every part that prints appears in equal strength, and the printing portions must consist of finite areas, lines or dots. In the reproduction of a photograph the component units of the halftone block must all be equally black, the various intensities of tone being interpreted by the size of the dots representing those tones. In other words, to produce a variation in tone, black units of equal strength are provided, the variations being produced by changes in the proportion of ink-bearing surface to white paper. In intaglio the printing cavities may be deep enough to carry a full strength of colour, or so shallow that they yield a proof showing merely a delicate tint. It has been sometimes said that in the case of copperplate etching all the lines are equally black: it will be seen, however, that considerable variations exist. The characteristic intaglio quality is due chiefly to the difference in the depth of the cavities.

Speaking of photographic methods, it is interesting to compare mezzotint and photogravure, which are distinctly analogous. In mezzotint there are minute cavities with an irregular grain; in engraving the plate this grain is scraped away to varying depths, thereby making the lighter tones. A photogravure plate has minute grains all over it, the intervening cavities varying in depth, thereby producing different depths of tone. In rotary gravure a ruled screen is used to form the grain.

Rotary intaglio printing is really a quite old process, and has been used by calico printers since 1785. For many years it has been utilised by wallpaper printers at speeds of 120 yards per minute for five colours in perfect register, and the runs extend to millions.

PRINCIPLES OF ETCHING.

On the subject of photo-mechanical intaglio work there are two processes to consider. The first of these is intaglio halftone or inverse halftone, which is similar to the halftone block, but, instead of a raised surface, sunk-dots form the printing plate. The depth of these dots is practically equal for every tone, and therefore they are of the same printing strength. A proof from an intaglio halftone plate is similar to one from a halfone block or a photo-lithograph, excepting that the softening effect of the intaglio impression will make their outlines less distinct. Intaglio halftone has several technical applications, the most interesting of these being its application to newspaper illustration in Germany in 1910.

Halftone intaglio and photogravure etching differ widely in their essential principles. The former process is similar to halftone relief etching, except that the printing parts are etched instead of those which do not print; such a method may be described as utilising a "perfect" or complete resist, in so far that the material which protects the metal from the action of the etching fluid does not, within the limits of the etching period, admit of any penetration. In photogravure etching, on the other hand, the "perfect" resist is substituted by a material that is only a partial resist; this substance is actually penetrated by the etching fluid at various stages of the etching, the shadows first, and so on through the lighter tones until the high-lights are attacked; in this way an etched plate is produced possessing qualities similar in some respects to those of a mezzotint engraving.

HISTORY OF PHOTOGRAVURE.

The rotary photogravure process is the direct descendant of the original process of photographic engraving of Henry Fox Talbot in 1852. He coated a copperplate with gelatine and a bichromate, and exposed this to light under a photographic positive, the grain being produced by means of a gauze. The plate after exposure was etched, the result being an intaglio plate with cavities of varying depths to represent the tones of the subject. Niepce de St. Victor suggested the use of a resin grain in 1855, and later in 1879 Carl Klic substituted the pigment process of J. W. Swan (now known as the carbon process) for the method employed by Fox Talbot, the dust grain being applied to the copperplate before the gelatine resist print; thus the method became known as the Talbot-Klic photogravure process. Klic, continuing his experiment in England, perfected a method of applying

*Lecture delivered at Stationers' Hall, London, March 4, 1925.

the process to cylinders, and interested Messrs. Storey Bros., of Lancaster, in the work; as a result the Rembrandt Intaglio Printing Co., Ltd., was formed at Lancaster in 1895.

For a number of years the work produced by the Rembrandt Intaglio Printing Co. was the cause of much conjecture among technical men who endeavoured to ascertain the manner in which the prints were produced. The company realised that it was not possible effectually to protect their process by a patent, because the publication of the specification would have disclosed the essential points; they preferred to work it as a secret process, and in this way managed to preserve the secret for a number of years. Many suggestions were made and articles were published giving scraps of information. Technical progress continued until a number of firms became engaged in the work, and the author published in 1915 a collected account of a series of investigations into the process. It must, however, be universally admitted that the Rembrandt process still retains the first place for the exquisite quality that has been constantly maintained.

THE PROCESS.

The first stage in the production of a rotary photogravure cylinder is the photographic negative, and from this a laterally reversed transparency or positive on glass, or film, is prepared. The positive is re-touched with great care, an operation which replaces that of fine etching in halftone blockmaking. The character of the finished result depends in a large measure upon the quality of the transparency and the skilful re-touching. In the case of periodical work, the transparencies of various subjects are made up and placed in their pre-determined position on large glass plates. In work of this kind great care must be taken that all the transparencies match, otherwise their etching value will differ. The transparencies are then printed on a prepared paper, the coating of which is sensitive to light. The sensitive coating consists of gelatine made sensitive to light by immersion in a solution of potassium bichromate; this film afterwards becomes the etching resist. The paper is described as "carbon tissue," and contains a black or brown pigment; special forms of carbon tissue are made for photogravure, the bulk of which is supplied by the Autotype Company. The greatest possible care has to be taken in sensitising the tissue in order to produce uniform results.

The exposure of this film of gelatine on the paper to light under the positive causes a change in the gelatine, making it lose its solubility in hot water, the depth of the insolubility in the gelatine increasing with the amount of light action. In the portions corresponding with the high-lights, therefore, the depths of the insolubility will be the greatest, and this will gradually decrease until in the shadows there will be practically none at all. The carbon tissue is also exposed behind a special form of ruled screen consisting of clear cross lines on an opaque ground, the proportion of the white lines to the black portion being in the ratio of 1 to 4. The effect of this exposure is to form thin, dense cross lines on the tissue; in the etching process, these lines protect the metal and form the walls of the separate cells or cavities that constitute the printing surface. This honeycomb or cellular structure gives great strength to the etched surface, because the "doctor" (the purpose of which is explained in a later part of this paper dealing with machinery) is continuously supported and cannot dip into the cavities.

The screen ruling is usually 150 lines to the lineal inch, but its fineness has no appreciable effect on the ease of printing. On the Continent some work has been done, using a special type of grain screen. The screen itself takes various forms—in some cases engraved screens are used, and in others photographic copies; but the most convenient form is a film ruled screen made on the Continent.

After exposure, the tissue is immersed in water until the gelatine becomes flaccid, and in this condition it is transferred and squeegeed to the previously cleaned polished copper cylinder. The insoluble portions of the gelatine are near the surface of the paper; these are now in contact with the metal and the damp gelatine adheres to it. The cylinder is now revolved in a tank of water, and the temperature raised to about 105 deg. F.; the effect of this is to soften the still soluble gelatine, so that the paper may be peeled off. By gently laving with hot water the whole of the soluble portions of the gelatine are removed, leaving upon the copper the gelatine print consisting of a thick layer in the light tones, and a thin, easily penetrated layer in the shadows, covered in every portion with the thin screen lines. The gelatine coating on the cylinder is then dried, and all the edges that have not to be etched are protected with an acid-resisting varnish.

In order to minimise the stretching of the paper and consequent lack of register, and for other technical reasons, some forms of tissue may be immersed in a mixture of alcohol and water, instead of water alone. Methods have also been devised which enable the tissue to be mounted on the cylinder without wetting the paper; the dry tissue is held in position against the cylinder and jets of water are directed between the copper and the gelatine; the cylinder is then revolved and the wetted gelatine brought into contact with its surface, with the film of water in between.

ETCHING.

The etching of the cylinder is a process of considerable technical interest. The measurements made by the author show that the average thickness of the film in the shadow portions is 1/5,000 in., increasing to a maximum of 3/5,000 in. The etching is controlled by the differences in thickness of the various parts of the gelatine resist, the greatest difference not exceeding 0.0004 in. The etching mordant is a solution of ferric chloride usually treated with ammonia to make it suitable for its purpose. The cylinder and the resist are immersed in the solution of ferric chloride and rotated. After a short time it is noticed that the portion of the copper represented by the shadows turns black, indicating that the ferric chloride has penetrated the thinnest portions of the gelatine, proving that the etching of these portions has begun. If a weak solution of ferric chloride were used, the gelatine would be penetrated through all its different thicknesses in a minute or two, and the work would be rendered useless. The etching is controlled by starting the work with a strong solution—usually 40 deg. B.—and gradually reducing the strength of the etching baths until the high-lights are penetrated. The duration of these baths must be decided by experience and the result that is required, and will vary between 25 to 45 minutes. It will be seen that the control of the etching lies in the relative time at which any particular tone is

penetrated by the etching solution; this is exercised by the adjustment of the strength of the baths of ferric chloride solution, and is also influenced by their temperature.

In dealing with large cylinders, it is necessary to employ mechanical devices to enable them to be transferred readily between the etching baths of different concentrations. In a well-organised establishment the schedule time to produce a finished cylinder having a surface 40 in. by 56 in. is forty-eight working hours from the photographs being received to the completion of the etching. This time includes the separate photographing of the illustrations on each page, and the re-touching of the negatives. This time could be improved upon for rush work, and, of course, a single subject on a small cylinder could be put through in a few hours.

TYPE MATTER.

It was not until 1904 that type matter was regularly printed from photogravure cylinders, although authentic examples have been shown produced at an earlier date. Dr. Mertens was the proprietor of a patent taken out in 1904 for the reproduction of type matter and illustrations together from rotary intaglio surfaces. This patent was successfully fought in England in 1914, but it still holds in Germany, and royalties continue to be paid in that country to the patentees.

The etching of type matter upon a gravure cylinder presents no technical difficulties. In some cases the impression of the type is taken on the sensitive carbon tissue, which is dusted with bronze powder to make the impression opaque, and the tissue, after a suitable exposure to light, is transferred to the cylinder and etched. A transparency to be used for printing photographically on to the carbon tissue may also be prepared by taking an impression on translucent paper and dusting with bronze powder. The most satisfactory results, however, are usually obtained by preparing a photographic negative and a positive of the type matter, and printing from the latter on to the carbon tissue.

The cylinders for photogravure printing were originally specially hardened copper tubes similar to those used by calico and wallpaper printers. It is found, however, that it is not possible to produce tubes of sufficient uniformity, and for this reason they have been discarded in favour of cast-iron cylinders having a copper surface prepared by electrolitic deposition. For this purpose a cast-iron sleeve is employed $\frac{1}{2}$ in. in thickness, and on this the copper is deposited to a thickness of $\frac{1}{2}$ in. The weight of a cylinder 56 in. long by 40 in. circumference, after depositing, is approximately $3\frac{1}{2}$ cwt.

(To be continued.)

What I Owe to the Printer*

By THE EDITOR

I MORE than others, am your debtor. It is difficult to imagine what life would be without the printed word. It is true that first by the gift of speech and memory, and then by the hand-written word, laboriously but lovingly inscribed, knowledge—much knowledge—filtered down the ages. But it was also true that this knowledge was reserved for the high, the rich and the few: the lowly, the poor and the many sat in great darkness. The coming of printing into Europe was like the fulfilling of the mighty word—"Let there be light." It was, I speak reverently, the incarnation of that word pervading the universe in art, philosophy, poetry and drama, so that it could be seen and handled by the multitudes of men. One has only to visualise a life cut off from books and from that store house of memory which the printed book has so plenteously filled to realise how poor and dwarfed our life would be but for the work of you and your fathers in the craft. It is to you that men like me owe an almost unredeemable debt. I can sit at the gates of wisdom and think the thoughts of Plato, Aristotle and Socrates. I can close my eyes to the sounds of the life of London and hear the quiet words of Gautama, of Confucius, and of the Son of Man Because of the printer's craft I can see the waging of the Trojan War, or I can walk in quietness through the Elysian Fields. I can wander among the stars and with Job can ride the whirlwinds of God. You have opened doors to wonder lands and seas, and by your work the boy in an East End garret can forget his misery and walk among the stars.

The printer is allied with the romanticists and poets of the ages. He is the twentieth century troubadour. It is you who are delaying that unhappy day when mankind will have become mere automata, and when material things may be the greatest things. You find a way deep down beneath the materialistic and sordid to the romantic and beautiful, and help to perpetuate in a drab, sordid and naughty world the sentiment which gives glow to life.

This is a great thing to have done for the human race, one of the mightiest things ever done, and it is a reasonable call to you that you should continue to do this worthily and beautifully. It is a great thing to be able to buy for a few pence a copy of Shakespeare and read his immortal lines, even in type that is almost illegible, but it is a greater thing, and much more pleasant, to take from my shelves a well printed book, a book worthy of its author and its subject. Our fathers are glad enough to sit in life's eventide and read the familiar words from the greatest book of all, to lighten the coming shades, but to them the simple, clear, well printed word is an added joy. I could read Thomas à Kempis or William Blake, however badly their words were wrought out on paper, but their message to me is always sweeter and comes to me with more beautiful grace because they are set forth beautifully.

You printers have many temptations to disregard the greatness of your vocation. I know there is printed much which would be better never put in type. Thousands of books have been written which have not enriched by one redeeming thought one single mind, but remember that this is nothing compared with that great stream of literature telling of the rise and fall of many peoples, of the sins and sorrows of great souls, of the thoughts and aspirations of the giant thinkers of the world. All this has come to lowly men, poor men, because of you, and in the name of a forgetful but really a very thankful host, I pay you my respect and homage.

*Substance of an address delivered by Mr. A. E. Owen Jones to Sheffield Printers, March 19th, 1925.

Sheffield Printers' Celebrations

Annual Dinner and a Conference

NEITHER the much-talked-of bad trade of Sheffield nor the possible imminence of a great upheaval in the printing trade was allowed to interfere with the cheeriness and heartiness of the annual gatherings of Sheffield master printers on March 18 and 19.

The annual dinner was linked up with a special gathering on the following day, under the auspices of the District Committee of the Joint Industrial Council, when Mr. George W. Jones delivered an inspiring message to a large number of printers on "Craftsmanship and the Printer," and Mr. A. E. Owen-Jones spoke of "What the World Owes to the Printer."

These gatherings were characterised by great enthusiasm. The dinner synchronised with the election on the same day of Mr. Edgar J. Northend as President of the Sheffield Association. Mr. Edgar Northend is a son of a great printing family. His father, Mr. John Northend, is well known as a great typographical student and worker; his brother, Mr. W. F. Northend, achieved great distinction as a student of South Kensington, and some of his hand-printed and hand-bound books are beautiful specimens of craftsmanship. Mr. John Northend was president of the Association in 1909, and it must have been a great satisfaction both to him and Mrs. Northend to be present at a dinner presided over by their own son.

Supporting the President at the centre table were Mr. W. B. Wykes (President of the Federation), Mr. G. W. Jones (London), Mr. J. W. Northend, Mrs. E. T. Northend, Mrs. J. W. Northend, Mr. P. Hartley (President of Huddersfield Master Printers' Association), Mr. A. E. Owen-Jones (editor of THE CAXTON MAGAZINE), Mr. J. H. King, Mr. J. W. Hyde (Loxley Bros.), Mr. J. H. Melluish, Mr. C. Woollons, Mr. G. Stembridge (ex-president, Master Printers' Federation), Mr. Frank Hobbis, Mr. Foxon, Mr. Maugham, Mr. H. G. Marsden, Mr. Hartley, Mr. R. S. Midgley, Mr. W. A. Townsend, Mr. W. W. Chisholm, Mr. Kemp, Mr. Bloom, Mr. Beswick, Mr. E. Hyde, Mr. Hampson.

Others present included Messrs. J. H. Cairns, A. Baldwin, Lettall, Weston, Wiseman, Slater, G. K. Marshall, W. A. Townsend, E. W. Parker, H. S. Marshall, W. F. Northend, Harry Hartley, Peck, C. Peck, Bescoby, Goodlad, C. L. Woollons, Frank Woollons, Hollingsworth, Foster, Gill, Rastall, Wilkinson, Halliday, L. Wilkinson, F. J. Carr, and Neville.

The toast of "The Federation of Master Printers and the Yorkshire Alliance" was proposed by Mr. J. W. Hyde, a director of Loxley Bros. He at once repaired an omission in the toast list, doubtless due to the innate modesty of the individual concerned, and proposed a preliminary toast, "The President of our own Association." Very appreciative of the work Mr. Edgar Northend has already done as secretary and treasurer, he said they were all proud of him, and let it be known that the new honour had been conferred upon him, not because he was the son of his father, but in recognition of his grit and work for the Association, the Alliance and the Federation. He was a man in touch with all the movements of the trade, and he, the speaker, hoped to see him take an even greater place in the councils of the Federation. Mr. Hyde then spoke very appreciatively of the work done by the Federation, and particularly by its successive presidents.

Mr. W. B. Wykes, in responding for the Federation, referred to the fact that the parent organisation was born in Yorkshire, and that Yorkshire had also found for the Federation several of its illustrious presidents—Mr. H. Cooke, Mr. G. E. Stembridge, Mr. E. G. Arnold, and Mr. E. W. Humphreys. Yorkshire had also contributed very largely to the personnel of the Council, particularly in their own Mr. W. A. Townsend, who was a very wise counsellor and guide, and who stood very high indeed in the esteem of his fellow councillors. Mr. Wykes paid tribute to the successful initiation in Sheffield of a district committee of the Joint Industrial Council, and then in speaking of the work of the Federation pointed out that one of its functions was to try and influence the Government of the day for the benefit of their own trade and the public generally. His hope that their efforts to secure a return to penny postage would be successful was received with great applause. He pointed out as a co-incidence that this year not only had they in Sheffield elected a son to follow the father, but that at the Federation meetings in May Mr. Howard Hazell would be called to occupy the presidential chair of the Federation occupied by his own father many years ago. Mr. Wykes spoke appreciatively of the work of the younger men in the trade, and looked to their continued and growing interest for the enlarged prosperity of all their organisations.

Mr. Percy Hartley responded on behalf of the Yorkshire Alliance with a very interesting account of the work alliances are called upon to perform.

"The Sheffield Master Printers" was proposed by Mr. George W. Jones. He spoke with great feeling of his associations with Sheffield. It was to that city he went as a young journeyman, and there he had worked with much happiness for a few years of his eager young manhood. He had had the friendship of Mr. John Northend for nearly 40 years, had known their new president all his life, and congratulated him most heartily upon the position he occupied. Going on to speak of the work of local associations of printers, he said that but for them there would be no Federation, just as but for the virile manhood which came up to the metropolis from the small towns and villages of the land the life of London would be impoverished. Going on to preach his gospel of pride of craft, Mr. G. W. Jones put up a great plea for thoroughness in work. Sheffield was known the world over for the excellence of its steel work. Her name was one of the bonds of England because so many of her workers had been faithful and true in their task. Sheffield steel work and her plate were synonymous with excellence. Could the same be said of her printing? Was Sheffield printing as excellent as her cutlery? Their craft was far nobler than the making of armour plate and bayonets, and was worthy of the best. The world owed nearly everything to the printing press, and it was up to them all to see to it that the great traditions surrounding their calling were maintained. Theirs was a noble craft and worthy of the greatest sacrifice they could make for its welfare.

The Chairman in his reply humorously reminded his friends that one of the disadvantages of being a junior member of a firm was the difficulty of

realising that you are grown up. But his proud position there rather brought it home to him. It was a matter of pride to some of them that they were counted worthy to take over positions held by their fathers. He thought there was still plenty of work to be done in trade organisations by the younger men, especially on the constructive side. There was more and more room for good printing, and he thought one of the best things that could happen would be for a truce to be called in these disputes and bickerings, and that George W. Jones should be called to the chair of the Federation to go up and down the land preaching his glorious and inspiring message of craft pride.

Mr. J. H. Melluish very felicitously proposed the health of the visitors, and was very appreciative of the presence of Mr. Wykes (the Federation President), Mr. George W. Jones, and Mr. Owen-Jones.

The latter gentleman responded, and a synopsis of his speech will be found elsewhere in this number.

Mr. R. S. Midgley, the secretary of the association, made excellent arrangements for the dinner, including a very delightful musical programme.

Bristol Printers

The Human Touch in Industry

THE Bristol Master Printers' and Allied Trades Association held its annual dinner on March 19. The President (Mr. J. A. Arrowsmith-Brown) was in the chair, and supporting him were the Lord Mayor, Messrs. W. B. Wykes (President of the Federation), W. E. Harding (President of the Bath Master Printers' Association), G. H. Holloway (Vice-Chairman, Bristol Association), Hartland S. Wright, H. J. White, and Captain G. L. Stratton, M.C.

After the loyal toasts, Captain G. L. Stratton proposed "The City and County of Bristol." He said from an outsider's point of view to come to such a city was really marvellous, because it possessed many things other great centres envied. There was one interesting thing concerning the master printers that was worth specially recording, and that was the first litho machine worked by power was worked in Bristol.

The Lord Mayor, in responding, said Bristol regarded the printing trade as one of its most important industries. The people relied upon them for every source of information, for the thoughts of authors, and for the opportunity of sending greetings to others. Then, again, what would England do without the hoardings? It would be a sorry day indeed if they disappeared, for they were not only a source of information, but were often absolute works of art.

Mr. Hartland Wright, in submitting "The Federation of Master Printers of Great Britain and Ireland," said the industry was the greatest in the world, for it was impossible for the people to do without it, and he wondered if they recognised the great privileges they enjoyed or the great influence they wielded throughout the world. They must take a serious view of the future so far as their employes were concerned. At present they were like a ship in stormy weather, but they could by strenuous effort get it safely into calm waters. The business was not in too flourishing a condition, and they could not expect it to be unless they obtained a more peaceful outlook. It behoved them to cultivate to the utmost a conciliatory attitude towards those with whom they had to do. There was a different feeling in the trade to-day; one of suspicion, and they had to replace that by a feeling of confidence and restore, as he believed they could, something of the human touch that once existed. (Applause.) Confidence must be restored in order that willing service could be obtained. What was required was co-operation. The Joint Industrial Council would prove most useful in that respect, and could be developed to an unlimited extent to produce that atmosphere that used to exist, but which, to a great degree, was now lacking. In Bristol their Council was working happily and successfully. It might cost more money to get that co-operation, but it would be a pound spent to reap £100 when the confidence of the workpeople was restored. (Applause.)

Mr. W. B. Wykes, responding, said he represented 5,000 members, employing nearly 300,000 people, and they ranked amongst the first six trades in the country. They did not know what was ahead of them, but he was satisfied that the Federation was doing its level best to promote peace in the industry. Before Mr. Whitley introduced his Joint Industrial Councils they had in the trade what was called a betterment movement. The headquarters recognised what good work had been done by the Bristol J.I.C. It was not easy work, for a great deal depended on the personnel of both sides. They had to give and take, and so far remarkable work had been done. Success had been met with in promoting peace in the industry on a scale second to none, but there did come a time when principles were worth fighting for. A week ago they had to break off negotiations at a National J.I.C. meeting, having failed to get a joint settlement. The employers' panel had gone as far as any could have gone to arrive at a satisfactory verdict, and unless a settlement was reached shortly thousands more would be out of work. If he could see a constitutional way out he would take it. (Applause.) Bristol was recognised as an important printing centre—too well known for some of the London and provincial firms. (Laughter and applause).

Mr. W. E. Harding, in proposing "The Bristol Master Printers' and Allied Trades Association," expressed regret at the absence of Mr. W. T. Bodey, and added that a good sign was the willingness of members to give up so much time to the work.

In responding, Mr. G. H. Holloway said organisation was an important point to-day. It was not possible to go along on the rule of thumb method or of thinking that what was lost on the swings could be made up on the roundabouts. There must be organisation in each business, and in the trade as a whole. They were in the proud position of having a most efficient organisation. Bristol had not lost its entity, but was closely associated with headquarters, being an important cog in the large machine. The formation of the Joint Industrial Council was a big step in the right direction. In conclusion, he paid tribute to the memory of the late Mr. R. J. Huddleston, who was one of the finest representatives the trade ever had. (Applause).

William Morris—Printer*

By THE EDITOR

GREAT is the versatility of genius. "Jack of all trades—master of none" is reduced to utter absurdity when applied to a certain class of men. There are in the business life of our country to-day those who are at once the marvel and despair of most of us. They can turn from one thing to quite another with the greatest ease and be equally successful in all. But such success in commerce is as nothing compared to a similar facility in the crafts. Yet such is found.

The first thing about William Morris. He was master of many of the arts and crafts, practising them all at the same time with thoroughness and beauty. He was not a poet who made wallpapers for a hobby, nor a dyer of silks who played with a printing press; he was one great genius.

Printing as a craft did not attract this great man until he was fifty-three. He was never insensible to the charm of a well-written page or a well-written book. But he seems to have taken it for granted that in the period of his own great literary output that book-printing as an art was dead. He heard no personal call to revive it. Stained glass, tiles, wallpapers, figured silks, printed cottons, carpets, embroideries, tapestries, furniture were some of, but not all the things he was designing and working at with his own hands at this time. His awakening to a conception of printing as an example of "things you know to be useful and believe to be beautiful," and his endeavour to adopt it as within the scope of his own activities came about in a fortuitous way.

A few good examples of the best class of commercial printing were being exhibited at the first Arts and Crafts Exhibition, and Morris was greatly struck by the fact that out of the long list of his own printed works not one was felt by him to be worthy of inclusion as a printed specimen. This was for him both a regret and a reproach, and from this year 1888 Morris resolved upon designing and possessing a fount of type of his own, and of printing books worthily.

Another incidental thing strikes one as this book is read. We in the printing trade very rightly stress the importance of apprenticeship and thorough training in our craft. Morris himself, though driving many horses abreast, and giving only parts of days to this new enterprise, did become a master printer. He knew far more about type, paper and ink than most of us. Yet he set himself as humbly as a beginner to learn these things. And did it. It must be remembered, too, that there are many private presses in this and other countries where what may be called amateurs continue to produce beautiful work wrought out with beautiful understanding of the craft and mystery of book-printing. May this not come to some of us as a challenge? It is so easy to be satisfied. To go on learning when there seems no certainty of financial gain does not appeal to many. But Morris's labours do certainly suggest a larger appreciation of men who follow in his footsteps and I hope make their voice heard by others who are to carry on the great work of perfecting the printed word. The story told in this book is entrancingly interesting. Every printer should read it, and it would be a munificent and beautiful thing if one of our rich printers could present a copy of it to every student in all the printing schools of the country.

When the door of the Kelmscott Press opened—the front door of a tiny cottage in Hammersmith—neither William Morris nor anyone else foresaw that seven years afterwards he would be hailed as the master printer of his age, that books printed by him would be fought for in the auction room and treasured in the greatest libraries of the world.

To use Morris's own words, he "began printing books with the hope of producing some which would have a definite claim to beauty, while at the same time they should be easy to read and should not dazzle the eye, nor trouble the intellect of the reader by eccentricity of form in the letters. I have always been a great admirer of the caligraphy of the Middle Ages, and of the earlier printing which took its place. As to the fifteenth century books, I had noticed that they were always beautiful by force of the mere typography, even without the added ornament, with which many of them are so lavishly supplied. And it was the essence of my undertaking to produce books which it would be a pleasure to look upon as pieces of printing and arrangement of type. Looking at my adventure from this point of view, then, I found I had to consider chiefly the following things: the paper, the form of the type, the relative spacing of the letters, the words, and the lines, and lastly the position of the printed matter on the page."

To this work he brought much learning, exhaustive inquiry and rare artistic taste. There may be difference of opinion about the types he designed, but it always has to be remembered that these types were designed not only for book printing, but for the printing of great and glorious books. The "Troy," the "Golden," and the "Chaucer" all speak of infinite care and tireless energy. In the course of his work the paper he used was as carefully studied as the type. The making of book paper in his day had reached a low ebb, and the material Morris required had to be made of unmixed linen rags. Not only would he have paper with long and fine fibres, but have every care given to each stage of its handling. It had to be thoroughly fermented, boiled and pulped. It must be untouched by a chemical bleach, lifted solely and carefully by hand, sheet by sheet, by a skilled and unhurried workman, and then gradually dried without artificial heat. Hurry to Morris was always the enemy of efficiency. Three papers were made for Morris by the late Joseph Batchelor of Little Chart, near Ashford. Batchelor was a papermaker after his own heart. No other paper was used for any of the Kelmscott Press books than those which came to be familiarly known as the "Flower," the "Perch," and the "Apple." These were the watermarks of the papers.

Morris's experience as a dyer had prepared him for a certain amount of trouble with ink, but he met with far more than even he had anticipated. After no end of trials, Jaenecke, of Hanover, provided him with an ink made of old-fashioned pure materials, and his troubles in this direction were over.

*"The Kelmscott Press and William Morris Master-Craftsman. By H. Halliday Sparling. Published by Macmillan & Co., Ltd. Price 18/- net.

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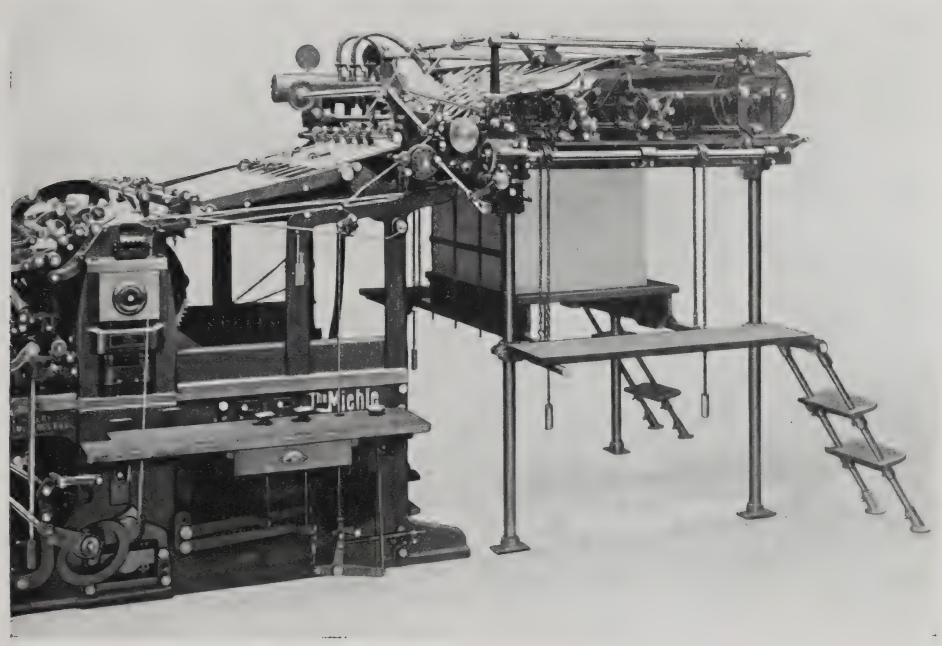

One of the important features of this Feeder is an arrangement whereby it is unnecessary to disturb the pile of sheets when printing the reverse side. To feed the sheets and turn them over, the pile is put into the feeder with the leading edge near the outer feed roller. The suckers then put the sheets on to the feed roller, which in turn carries them around the turning drum and between the carrying tapes, coming down on to the feed board again in the ordinary way. The pile feed board and pile delivery board are interchangeable with each other.

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Morris started with one hand press—an "Albion"—which in principle was essentially similar to the one used by Caxton. Two others and a proofing press were added, but he found that for short runs such as he required for his books, when each sheet had to be pulled with as much care as an etching, the hand press met his needs.

The culminating point of his career as a master printer was reached in the production of the magnificent folio Chaucer, which formed a great landmark in the history of printing. In most respects it is the greatest triumph of English typography. As A. L. Cotton said in the contemporary review: "With its eighty-seven illustrations by Burne-Jones, each surrounded by an ornamental border from the hand of Morris, with its abundance of ornamental initial words and letters, with its marginal decorations, its paper firm and crisp to the touch like the paper of a Bank of England note, its exquisite type, its careful presswork, the volume compels admiration even from those most disposed to cavil at the mediævalism of the great designer. As a marvel of typography, it ranks with the very finest efforts of the past. . . . In the selection of Burne-Jones as illustrator, Morris again was fortunate beyond his hopes. It was a canon of his bookmaking that the ornament, whether pattern-work or illustration, must form as much a part of the page as the type itself, and must, in order to succeed, submit to certain limitations, and become, in his own phrase, architectural. . . . In other words, the illustrations of a volume should sum up in themselves the printed matter; they should be decorative in character, conceived with due consideration to the nature and arrangement of the type; and, as ornaments, they should take their place amidst the text, not detached and unconnected as in many modern livres de luxe, but giving, by their very position, something of distinctive dignity to the typography."

It may be claimed for William Morris that his reputation would have been tremendously high if it had rested upon any one of his achievements—his poetry, his dyeing, his tapestry, his cabinet work, or his printing. In printing alone he accomplished the good work of an ordinary lifetime. His printed books are appreciable by all those who have eyes to see, and set before us a standard of attainable excellence.

In this most interesting story of the Kelmscott Press, beautifully published by Macmillans, all praise is ungrudgingly given to many associates of Morris in this great adventure. To Emery Walker, who was virtually a partner in all but name in the Press, and who shared with Morris in the labours, cares and anxieties involved; to William Bowden, who acted as compositor and pressman in turn; to Bowden's daughter, Mrs. Pine, and his son, William Henry, great praise is given.

This is a book reflecting glory upon author, printer and publishers. It has been a joy to read it, and it will remain a treasured addition to those volumes to which we turn again and again.

Re Women Publishers Limited

Printers Misled by Directors' Names

AT a meeting of creditors of the above company, held at Carey Street on the 12th March, 1925, Mr. Pepys, an Assistant Official Receiver, enquired whether certain of the directors of the company, particularly Miss Gates and Lady Aberdeen, were present.

It transpired that Lady Aberdeen was thought to be in Scotland, but that no one present knew of the present whereabouts of Miss Gates except that it was thought she was in London.

The Official Receiver stated that it was the duty of the company's directors to attend the meeting of creditors and give the Official Receiver assistance in investigation of the company's affairs.

The statement of affairs had eventually to be prepared by another director, but was at present incomplete.

The Assistant Official Receiver then related the history of the company, and gave particulars as to the directors and the issue of capital, etc. He stated that the business of the company was largely in the hands of Miss Gates, with the assistance of Dr. Luboff. He stated that the business of the company had proved unprofitable throughout, and that there had been a net loss on trading of £6,351, in addition to overhead charges.

The Official Receiver next referred to the issue of the debentures, and stated that in his opinion, their validity could not be challenged.

The Assistant Official Receiver stated that in his opinion the failure of the company was due to the organisation of the company and the projects being framed on too ambitious lines, and the fact that there was no sufficient system to estimate and control expenditure.

The statement of affairs lodged as at 25th July, 1924, showed the following position:—Liabilities: Unsecured creditors for trade debts, £7,167; preferential creditors, £128; debenture, £1,000; total, £8,295. Assets: Cash, £3; stock, £50; book debts, £938; total, £1,091. Deficiency, £7,204.

Mr. Fincham, the receiver for the debenture holder, was present at the meeting, and was invited by the Official Receiver to make a statement of the financial position so far as the debenture holder was concerned.

Mr. Fincham stated that he had realised the sum of £1,136, and had made payments to the extent of £386, leaving a net sum of £750 in his hands available for the debenture holder subject to costs and the receiver's remuneration.

He had failed to realise the copyrights belonging to the company, and proposed to dispose of same for such sum as he could get, but the very most that he expected to obtain was £500, so that in any event it was in his opinion impossible that there would be sufficient to discharge the debenture debt and interest and the costs and charges in connection with the receivership in full, and that therefore there could be no division for the unsecured creditors.

The Official Receiver enquired whether any of the creditors desired to nominate an outside liquidator, but pointed out as there were no funds available, any such liquidator would have no fund to which to resort for his remuneration. No nominations were forthcoming, and the matter was therefore left in the hands of the Official Receiver to continue as liquidator.

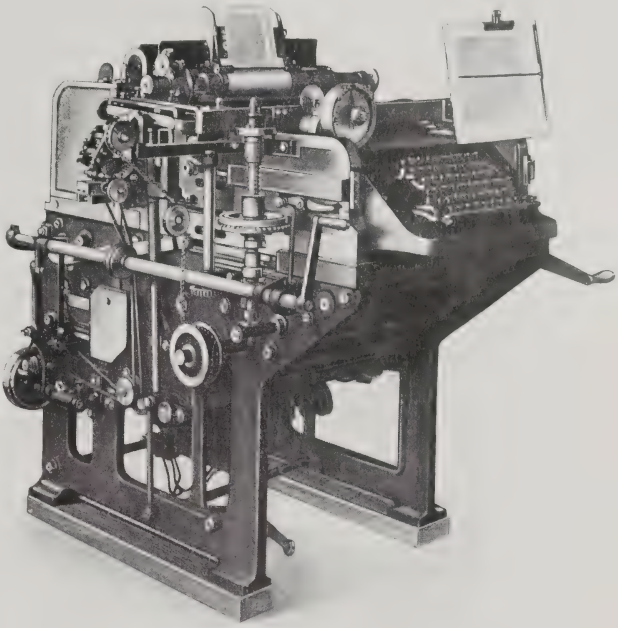
A Wonderful Invention for Offset Printing

The Typewriting Machine "Typary"

THE extraordinarily rapid development of offset print in recent years, called forth by the requirements of the present day, has had the effect of awakening general interest in the question how best to produce composition for this process. Lithographers, who had hitherto been somewhat conservative as regards technical improvements, have realised, though somewhat late in the day, the advantages which an improved process of reproduction was able to offer to the printing industry. For many years important fields of activity which were till lately exclusively the domains of multi-coloured lithography, were lost to relief-printing, which for a still longer time had at its disposal the help of the photographic camera, together with autotype and its accessory processes. In the construction of machines for book printing greater technical improvements had been achieved, while in flat-bed printing the good old lithograph press was still in use. But now the value of photomechanical processes has been fully realised, and with the arrival of offset printing, flat-bed printing also had its renaissance.

Book printing has some centuries of experience and tradition behind it in developing its methods of composition, and has gained a fresh lease of life and become adopted to modern activity by its ingenious composing machines, such as the Linotype, the Monotype, the Typograph and several other systems. Undoubtedly all these machines are excellent for the purpose of producing composition for relief printing, and are thoroughly satisfactory when it is a question of casting or moving metal types or metal lines, indispensable in book printing which requires metal types. From this metal type forme or its mould, the stereo, copies can be printed in the machine by the 100,000. Thus we get the whole work done directly from the composition to the printing. Of course many persons have already turned their attention to the fact, that in order to get a copy on a thin sheet of paper of the thickness of less than a millimeter, a multiple of this weight and of the size of the letter and formed of some valuable metal, must be passed through the machine, and this particular type is again fastened to a metal cone ten times its weight, which in like manner passes as a dead weight through the machine year in, year out. In the present day of economical industry and rational methods, with its highly advanced technical achievements, this process in the printing machine appears illogical. Men who have grown grey in printing business unconsciously realise it as a great technical improvement, when for the first time they see an offset machine in action, in which the zinc plate is only a fraction of the thickness and weight of composition in book printing. Equally unappropriate appeared the method of lithography to the book printer not long ago, and the latter saw with a certain pity his "brother of the stone," when he came into the work room, where the lithographic machines were in action, and where the heavy dead weight of the lithographic stone was being passed slowly and laboriously through the machine accompanied by the groans of a long connecting rod in motion, as he compared this with the swiftly revolving machines in the book printing room.

In respect to printing machines and the photomechanical reproduction of original texts offset-printing and flat-bed printing stand to-day side by side with the book printing. All the three have alike excellent mechanical and optical fittings. Whether the work could most advantageously be given to the book printing or to some other process of reproduction, very often depends upon the character of the original text, and should be treated as a matter of practical experience. All three processes will exist side by side, especially when men learn how to make a proper use of every improvement.



In the most important section, that of printing written characters, offset printing and flat-bed printing are, it is true, still dependent on the means of book printing, namely, the composition of metal types. In many places drawn or lithographed characters are practically only used as indicating fancy type. In relief printing composed or cast metal types serve immediately as the actual form, and in this way they fulfil the purpose of printing. It is a very different thing in the case of offset printing and flat-bed printing. In these processes very often, one may say generally, only one copy on paper is required for the further working, for producing the offset plate or the flat-bed printing form. This one copy may serve as a reimpression, or may be used on white or transparent paper for the photomechanical transference on to the plate, or indirectly on to

the cylinder for flat-bed printing. For the sake of this single copy we have to go through all the processes of book printing, composition, correction, arranging the formes, inserting them in the machine, in order to get after all only one copy. This is seldom obtained without much careful justifying of the formes and preparation of the machine, since an absolutely correct copy free from any shadows is a necessary condition for its further use in offset and flat-bed printing.

It is therefore obvious that the most specialised experts in the department of offset printing have for a long time made great efforts to invent a more simple and easy way to produce the composition in such a way as to obtain equally good results. In this connection various reproduction processes have come into existence, and Dr. Ullman has rendered special services in this respect with his Manul-press. If for reproduction in the offset form only one copy of an original text is required the thought may well arise, why not aim at producing it by a specially constructed typewriting machine. Even if we have only one copy at our disposal still the photomechanical processes are to-day so developed that we can obtain reproductions in any number required with the most exact record on the zinc plate. It is not altogether a new problem how to obtain characters by photographic methods and to employ them afterwards in flat-bed printing. The first suggestions go back to the middle of the previous century. About the year 1890 Professor Eugen Pozzelt, of Budapest, dealt with the subject in quite a new way, and took out an English patent, 14,525, for a photoelectrical apparatus, by which, with the help of a rotating drum, types were photographed as single letters. In England also W. Friese-Greene, a very successful and active inventor in many various spheres, worked out in 1895 a photo machine (English patent 7,099), in which the characters were arranged on tapes. During the last few years, when offset printing has been so exhaustively treated, quite a number of inventors, especially in England, have given fresh suggestions in the matter of photo-composing machines. These have been taken up in various ways in the German technical press.

Most inventors endeavour to solve the problem by means of photography. Nevertheless it must be confessed that this has its own special difficulties which we cannot enter into here. The first to arouse attention was Robertson with his machine, then came A. E. Bawtree, J. S. Brunnell, and various others. The most successful and perfected machine seems to be the Hunter-August machine, with its many ingenious details. The firm of Siemens & Halske has also taken out a patent for a similar apparatus.

Convinced that no solution has yet been found by purely photographic methods of the problem of creating a composing machine which answers in a really practical way to the requirements of flat-bed printing, the Polygraphic Company, at Laupen, near Berne, constructed a new kind of typewriting machine, which works on mechanical principles.

We must begin by saying that this company very early recognised the importance of the offset press, and was one of the first to secure for themselves the right to use the Manul printing process. This firm is now the greatest producer of offset printing in Switzerland, and employs ten of these machines. This undertaking did not limit their efforts to printing only, but felt compelled to collaborate in advancing the processes of modern printing and reproduction. The firm set up their own construction offices and laboratories, and created a special association for dealing systematically with these problems. This has been going on quietly for a number of years. In order to accomplish the task they had undertaken considerable intellectual labour, and many experiments were necessary. The task could not be solved by a stroke of genius, but needed researches, which included alike the domain of composing machines, the whole typewriting construction, and the modern methods of printing and reproduction processes. It became clear that the essential question was not only to invent a new typewriting machine for flat-bed printing, but that it was also necessary to invent a simple and practical way of securing the copying and the transfer on the zinc plate. The problem was solved in two directions. A typewriting machine was invented and given the name "Typary," and also a new process of transfer for printing, to which the title "Typon" was assigned. Patents had been secured in all civilised countries both for the "Typary" typewriting machine and the "Typon" copying process.

The "Typon" process is not only suitable for copying matters prepared by means of the "Typary," but is equally available as a process of reproduction for offset printing generally. For this reason it has already been variously described, and has been rapidly adopted and found of practical value. In this very periodical the subject is treated by another author. The "Typary" typewriting machine is not yet generally known to the public apart from a few scattered notices. The illustrations of it are published for the first time.

The book print typewriting machine "Typary" (protected 1919) has its origin in the noiseless line-of-type writing machine, and is characterised as a typewriter, although there are certain analogies connecting this invention with the typecasting and composing machine and the printing press. The "Typary" prints a line, and takes a position somewhere between the ordinary writing machine, printing single type, and the printing press and its latest variation, the "Typeprinter," printing whole pages or sheets. It uses removeable type-bars with type arranged in groups, and therefore stands between hand setting and the composing machine, lining up single type or matrices on the one hand, and stereotype producing from manufactured fixed formes by pages.

The "Typary" means to the flat-bed printer what the type-casting and composing machine does to the relief printer. It does not produce type of metal which, after it is cast, is put on the printing press, but writes on paper, setting a line of type at a time. The finished proof is transferred by chemical, photo-mechanical or photographic process to the flat-press plate, and printed by offset.

The machine responds to a most pressing need of the flat-bed printer, whose work has, up to the present, been limited to reproducing. Of course he can, where the printing is to be done by offset, set type by hand or by composing machine, as in the usual way of relief printing, and, after having printed a proof from a forme which would give a run of 100,000 or more, proceed to make a transfer from proof to offset plate. But it is hard to conceive of any reason why, instead of this impractical and round-about way, he

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should not finish the job by way of relief printing process in preference to using two different kinds of printing processes on one and the same job, and save time. There is undoubtedly among offset printers a keenly felt want of a machine which will produce a proof for transfer in a direct way, enabling the printer to reproduce therefrom.

This is accomplished by the "Typary," the peculiar construction of which makes it a typewriting machine with keyboard equipment, allowing at an average a speed of 10,000 strokes per hour (maximum 25,000), a performance which places it, as far as speed of production is concerned, above the typecasting and composing machines. Moreover, the material used is paper, the advantage of which, in comparison with metal, lies in the fact that it is cheaper, light of weight, lasting, easy to handle, transparent, clean, and that it has none of the health-endangering effects, such as lead poisoning, tuberculosis, etc., of the dust and the melting pot of the composing room.

The inventors have spent several years of strenuous work to produce a machine that will give offset printing an even chance with relief printing.

The problem has been solved by the "Typary."

Among other features of construction contributing to accomplish this result the following may be mentioned:—

1. A type-assembling device, technically a new departure, adding a fundamentally new principle of construction to present engineering knowledge. By means of this device the desired type is selected out of any given number of type (120 type characters on the one-style machine, 225 on the combination-style machine), and carried into line position for printing. This operation is performed within the same space of time required for typing out the corresponding letter, *i.e.*, one-fifth of one second (normally one-third of one second). At the same time, however, the key-stroke releases only auxiliary or connecting parts of the mechanism, while the completed line of type is set in motion automatically and simultaneously.

2. A combination or arrangement of type characterised by type-bars of varying width carrying book-print type and assembled in type families containing the sufficient number of letters required for one line (ordinarily 70, or up to 90 if desired). There is no possibility of not having provided sufficient type, not even in the event of having to cover a whole page with lines containing but one and the same letter, as, for instance, the rare letter "x."

3. A combination or arrangement of type in movable and interchangeable type cases or shelves, each containing a complete set or family of type (characters a—z, spaces, figures, signs) differing herein from composing machines which assemble a certain number of the same characters in magazines or cases. Another feature is the arrangement of type shelves in removable interchangeable shelf boxes or magazines, thus permitting setting in any desired style of type.

4. An inking and impression mechanism, working automatically and independent of the type-assembling mechanism, and printing one line at a time, permitting the keyboard operator to continue typing line after line without having to stop.

5. A setting, justification, and re-assembling control device, which automatically sets and locks one line at a time (length of line up to 32 cicero), regulates and controls spacing between words, justifies, corrects, admits insertion of hand type and illustration matter, releases line lock, and carries back in one single motion type to the recesses of the shelves. (There are used for this latter operation no grippers or corresponding catch arrangements on type or type-bars).

6. A throw-out or correction arrangement enabling the typist to correct errors of typing by simply striking the proper key, an operation impossible to perform on composing machines with dropping type or matrices, or on machines operated by a perforating device.

7. A line-spacing or adjusting device permitting any desired spacing.

8. A typographic points indicator of high speed.

9. A keyboard equipment, which by means of mechanical support of the escapement renders the touch as extremely light and speedy as is that of the best makes of writing machines. Universal keyboard, similar to that of the Smith-Premier, numbering 60 with shift device—120 characters.

Weight: Approximately 800 kilograms.

Power: ¾ h.p.

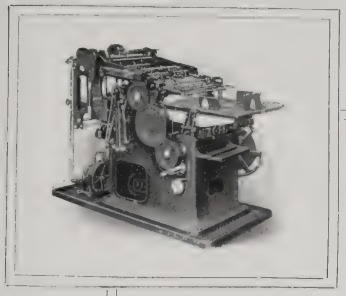
Size: Width, 75 cm.; length, 1 m.; height, 1.10 m.; floor space, 0.75 sq.m.

Speed of operation: Approximately 10,000 letters per hour.

Operation—preliminary: (1) Selecting desired style or styles and inserting type magazines. (2) Coupling of motor, regulation of ink apparatus. (3) Setting margin lock and line-spacing device. Operating: Typing out line, locking when bell rings, connecting motor by switch key, waiting two seconds when type-assembler will be ready for next line. Typing out next line while in the meantime the machine automatically makes the impressions, carries the type back to the shelves (requiring eight seconds), and switches off motor. Switching on motor a.s.f.: In the event of any kind of disorder or mistake the machine can be stopped instantly and at any moment by tipping the "emergency key." Having tipped the wrong key the typist can correct the mistake by means of a "type-release key." Between two words strike "space key." For tabulating and open space work spacing keys are provided. When the job is finished: Shutting off inking device, covering machine, cleaning of type (once a week, requiring about fifteen minutes).

We may notice as a typical feature of composing machines the assembling and breaking up of the matrices copying the work of the hand compositor. In the case of the "Typary" there is no assembling and breaking up, but only a simultaneous movement of about 70 type-bars to the printing position and back again to the position of rest. There is no dropping of the types, but every type of a line is of necessity brought to the printing position, just as the single type of the typewriter moves to its printing position.

The releasing of the types does not, however, result immediately from striking the keys, as with the usual typewriting machines, but indirectly, inasmuch as the typing of a line sets in motion in the interior of the machine a record device. Subsequently the printing mechanism forms automatically the line of print corresponding to the position of the record device, inks and prints the line, and returns the types to the magazines. During this process of printing the next line is put into position in the record device by striking



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the keys, and so on, so that the work is never interrupted.

All the type-bars of the "Typary" are exactly alike as regards their contour; they only differ in strength corresponding to the thickness of types affixed to them. The types are standardised. The type-bars are provided with regular indentations along one edge. These indentations have nothing to do with the breaking up, they only serve for the adjustment of the line. The adjustment of the line is produced by a movable organ, which sinks down into these indentations. This produces an exact adjustment of the line. These type-bars, on being released from the magazines, are conducted in channels formed of thin tightly stretched steel springs. These conducting lamells only serve to hold the type-bars, and when the line is completed they lie back into spaces alongside of the type-bars. For the spacing of the lines special space-bars, with strong springs on their sides, are provided, as already stated. The lamells have nothing to do with the spacing of the lines. It is not possible for a type-bar to leave its channel, no collision of the type-bars can take place anywhere. The type-bar moves at first along its channel in the direction of its length, but on the closing and opening of the lines a little obliquely to the line of its length, while the conducting springs which form the channels execute a sideway motion. On opening the line each type-bar returns back in front of its own opening in the magazine, and is drawn back into its magazine. The final result is a copy on white or transparent paper, adjusted and spaced like a metal type composition. The composition of tables can also be set up on the machine, for special keys are provided for this purpose, which can also be used for filling up. The excellent practical work that has already been done by the machine is shown by the fact that on one of the latest models a complicated list of fares of about 25,000 lines was set up for the Swiss Railway Administration in a short time without any difficulty. This work was executed in two colours on a two-colour offset machine, and this process proved considerably more advantageous than would have been possible with type composition and relief printing.

It was on the questions of corrections that most failed of all those who attempted to solve the problem of the composing machine for the flat-bed printing on a photo-mechanical or mechanical basis. This point is as important as the construction of the machine itself. In the case of photographic composing machines, letters produced by means of photography are placed in line one after the other on the transparent strip of film; in the case of the typewriting machine the assembling of the characters is produced directly on the paper. The book printer may think it strange to be told that it is possible to work with "scraps of paper." But it is a fact that a composing process on paper has been developed in connection with the "Typary." The process is quite simple and so trustworthy that it is not possible to see on the finished print whether and how often corrections have been made on the composition. In lithography a similar kind of way of doing the work is already in regular use. May we, for example, in the case of the multi-coloured chromo-print consider the precis cutting and needling of the copies. In flat-bed printing also the learned composer has in course of time appeared, who attains exact position of the flat-bed formes by accurate cutting of the transparent paper and of the glass. Corrections of the text, too, are often executed in this way. In the typewriting machine the process of development is as follows: The machine prints a continuous proof slip on paper line by line. On every line daggers are printed automatically right and left on the margin of the paper, which serve as indications for putting in corrections. The proof slips are numbered consecutively and are read by the corrector, who makes his correction marks in the usual way. It is evident that this does away with a whole process of work, for a first proof is not required, the corrections being made on the proof slips as they come from the typewriting machine. Faulty lines are written again and revised. They receive the same number as belongs to the corresponding slip. On a specially constructed cutting desk text strips and correction slips are so cut that they exactly fit each other, and no confusion can arise. The faulty lines of the proof are now replaced by the corrected lines in their proper order. Corrections may be made in this way several times.

The making up is done by measuring the whole length of the proof slip and by calculating the length of the lines accordingly. The proof slips are arranged together above a network of lines on a support and cut into the calculated length, *i.e.*, madeup. Title lines, paging and such like are written on a special leaf in the "Typary" process, and stuck on to the proper places. Lines above 12-points high must still be struck off by hand. Line drawings may be fastened directly in the original or, where the size is altered, photographs may be employed. A supply of ornaments is kept in the form of clean copies, which, too, are fastened in the same way.

The "Typon process" permits in the same way as Manul reproduction of originals printed on both sides. It does not require dye baths for developing and strengthening, nor does it require the use of glass plates, as the sensitising coating is put on paper, and these films will not only keep an almost indefinite time without losing in quality, but can be manufactured on a large commercial scale, and put on the market either in large rolls or in form of sheets cut to size according to requirements. For operation the user needs but a small printing or copying frame and some photographic pans.

For reproduction, the original is placed in the copying frame, pressed against the sensitised side of the film, the paper side of which is then exposed for about forty-five seconds to a light of 75—100 c.p., and, after developing, fixing and rinsing, all of which requires about five minutes, the film is ready for transfer to the zinc or aluminium plate. The advantages this process offers to the printer are so obvious that nothing further need be said on that score. The whole method of working this process from start to finish is extremely simple and inexpensive, and the work turned out cannot in any way be excelled. It may also be pointed out that the printer will not need to lay in a large supply, as he can purchase this film in any quantity from his dealer.

But the usefulness of the "Typon process" is not limited to the requirements of the trade. The "Typon" film has a wide field of application to the special purpose of amateurs and professionals of other lines wherever reproduction or making of facsimiles and copies are wanted. Every person who for some reason has had to reproduce text or illustrations from books, magazines, etc., as, for

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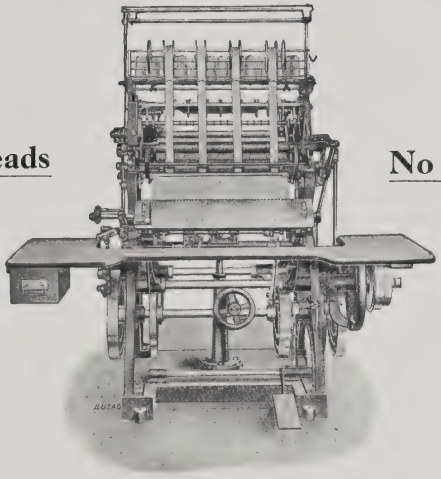

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instance, for projection for educational purposes, will understand how troublesome and time-consuming this kind of work naturally is, not to mention the expense for camera and accessories, the complete outfit consists of nothing more than a copying frame of very simple construction, three containers or pans for baths, one box of "Typon" film, a developing and a fixing solution. For the rest the method of operation is so simple that anybody can do it without any previous experience.

The " Typary " is in principle a typewriting machine belonging to that class of machines, only known in theory, where a whole line is first formed and then as a complete line printed. We may call it therefore a line typewriting machine, to distinguish it from the ordinary typewriting machines, which work on the letter-by-letter principle. The " Typary " works on the line-by-line principle. In considering the " Typary " we must put away all ideas of the composing machines. The " Typary " has no analogy in the history of engineering, either in reference to the usual type machines or to the well-known composing machines. It is something quite different, a third thing, which we may describe as a writing-composing machine, as there is no name for it. The machine has passed the stage of experiment. What it is able to do is shown by the annex to the present article. We are of the opinion that this new machine signifies a great advance for flat-bed printing, but we do not wish to discuss the possible consequences. The first publication of the new invention is sure to call forth a lively discussion in the printing industry. The discussion will surely contribute to further clearing of the question.

A small battery of three machines has been in use for some months at Laupen. Certainly in the course of time further technical improvements will be recognised as advantageous. But its inventors are hopeful and assured, for effective machines have taken the place of that first model with which, now some years ago, an attempt was made to assist a journal. It is intended to take up its manufacture on a considerable scale.

The company for the Graphic Industry, Ltd., at Berne, which has acquired the sole right of selling the " Typary " machine and the " Typon " process (both trade marks are protected by law) will, at the International Printing Exhibition in London, from 15th to the 30th of May this present year, exhibit a machine with two styles of letters, which will be ready in a short time.

Photogravure

From the Printer's Standpoint

ONE of the most interesting lectures given in connection with the printing trade in London for a considerable time was that delivered at the Stationers' Hall on March 4, in connection with the London Central Districts Master Printers' Association. For between four and five hours a number of enthusiasts were held together, either examining a very fine selection of exhibits, listening to a most lucid lecture, or asking questions and listening to their answers. It says much for the development of printing processes when such enthusiasm is shown.

The lecturer himself had not only carefully prepared his matter, his diagrams and his slides—he stood before his crowded audience as a born expositor—when words failed to carry his ideas, a piece of chalk and the blackboard served his ends. The exhibits included cylinders, positives, negatives, technical examples, and a fine collection of specimens in both monochrome and colour. These were lent by: Illustrated London News and Sketch, Ltd., Amalgamated Press, Ltd., Penrose & Co., Ltd., Sun Engraving Co., Ltd., Rembrandt Intaglio Printing Co., Ltd., Emery Walker, Ltd., G. W. Jones, Waterlow & Sons, Ltd., Cape Times, Southend Standard, G. & G. Ponton (Glasgow), Art Reproduction Co., Ltd., L.C.C. School of Photo-Engraving, John Swain & Son, Ltd., Pictorial Machinery, Ltd., Vandyck Printers, Ltd., and Soldans, Ltd.

Mr. G. Eaton Hart made an excellent chairman, and after the lecture guided the discussion into very interesting channels.

Mr. Fishenden was most heartily thanked for his painstaking work in the preparation and delivery of the lecture.

We intend to publish this lecture verbatim in three instalments, the first of which will be found on another page.

Multigraphs

In a written Parliamentary answer to Mr. T. E. Naylor, M.P., Sir William Joynson-Hicks, Secretary of State for Home Affairs, states: " I am advised that the process now in use for multigraphing by means of machines set with types are forms of letterpress printing, and that any premises or room in which any such process was carried on regularly and to a substantial extent would come within the definition of letterpress printing works, which are expressly included in the Act. The factory inspectors have been instructed in this sense."

The Pensions Annual Election

On Saturday, April 18, the poll for the 103rd annual election of the Printers' Pension will be taken at the Connaught Rooms, Great Queen Street, Kingsway, W.C.2, from 1 to 3 p.m., to elect 127 pensioners. There are 303 candidates for these pensions—217 men and 86 women—and there are 22 other candidates for special gratuities of £5 each. Those who wish to subscribe should note that Mr. Franklin will be at Gray's Inn Chambers on Wednesday evenings, April 8 and 15, from 6 till 8, and on Saturdays, April 4 and 11, from 12.30 till 2.30 p.m., or any day between 12.30 and 2 p.m

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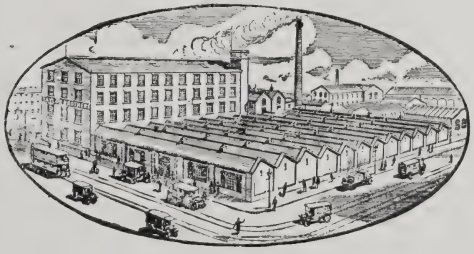

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EXTENSION OF THE LLOYD MEMORIAL CAXTON HOME

Banquet at the Hotel Cecil

THE extensions of the excellent organisations connected with the printing and allied trades for helping its industrial workers have been steady throughout many years. There never seems to be lack of enthusiasm or money to carry to their desired ends any beneficent ideas, and amongst the many foundations of this kind the Lloyd Memorial Home is one of the most successful. It had its origin in unobtrusive fashion, but its growth has been as phenomenal as the appreciation of its benefits has been general. It was only in 1911 that the present delightful premises at Deal were opened. Soon after the war extension became urgent, and Winchester House was purchased as an annexe, together with two villas adjoining. These premises, standing in two acres of ground, are used as a women's convalescent home, and provide accommodation for sixty-three. Then last year the new Printers' Peace Memorial Wing was opened, giving still further accommodation. Now it is proposed not only to extend the present properties, but to build residential flats for retired printers on the site of some old cottage property which belongs to the Society.

This new movement was opened on Saturday, March 21, at the banquet given at the Hotel Cecil, presided over by Viscount Hambledon. Supporting the Chairman were Mr. E. A. Braddick, Lt.-Col. Gordon Brew, Mr. J. R. Briant, Mr. H. Caslon, Mr. H. C. Goodall, Mr. Hawke, Dr. Dundas, Mr. C. W. Kimpton, Mr. Harry Lloyd, Mr. W. H. Lock, Mr. F. A. Major, Mr. J. Mortimer, Mr. T. E. Naylor, M.P., Mr. C. H. Roud (Chairman of Committee), Mr. Bromley Read, Mr. H. R. Reid, Mr. G. W. Stonestreet, and Mr. H. F. Warbey. There were about 350 other ladies and gentlemen present.

The toast list was very short, most of the evening being devoted to a very excellent musical programme.

Lord Hambledon, in proposing "Continued Success to the Lloyd Memorial Home," remarked that the wording of the toast had been well chosen, for the Homes had already been an unqualified success. They had long since passed the time of experiment, and he would be a bold man who would prophesy the ultimate future of such a movement. He had known it for 30 years—for he had opened the small home at St. Margaret's Bay in 1895. At that time there was accommodation for twelve men—to-day they could take two hundred. The greater development had taken place since 1910. That year the subscriptions were £490, and the value of their property £1,200. Last year the subscriptions amounted to £9,500, and the property was now worth £39,500. The trade might well be proud of such progress. He had recently paid a visit to the Deal Homes, and he felt they had an institution which of its kind could not be excelled in the country. All was well with them. And this was due to most excellent management. One of the wonderful features of the work was the fact that 200,000 members of the trade subscribed to its funds every year. It must be a great satisfaction that with the magnificent help of those whose name the Home bears they had gradually built up this organisation which was really their own—owned and managed entirely by themselves. The benefits shed abroad would not be counted by pounds, shillings and pence, but in the joy of returned health and happiness of the visitors to the Homes. Speaking of the latest development of their work, his Lordship said it had been decided to build a row of self-contained flats as homes for retired and aged members of the Society. It was not, of course, proposed to enter into competition with the excellent work of the Printers' Pensions Almshouses. The Deal flats would be let for about 8s. a week—half their economic rental value—and were intended for old members of the trade who could afford to pay that amount, and who would be glad to pass the remainder of their days in such health-giving and congenial surroundings as they would find at Deal. The scheme was to be very heartily commended to the trade, and it was greatly to be hoped it would be generously supported.

Mr. Harry Lloyd responded; so did Mr. Roud, the indefatigable Chairman of the Committee. On behalf of the Committee, Mr. Roud thanked those present for the way in which the new scheme had been accepted. This was a great encouragement to those whose work for the Homes was a labour of love, and to whom virtue was its own reward. He paid a very generous compliment to the way the Home was administered, and the hearty cheers which followed his references to Miss Gray and her colleagues on the staff must have sounded very pleasantly to those concerned who were present.

The only other toast was "The Chairman," submitted by Mr. W. H. Lock (Linotype & Machinery, Ltd.), who referred to the interest Viscount Hambledon took in all work for the alleviation of suffering, and particularly of his magnificent service to King's College Hospital.

The Chairman, in acknowledging the toast, which was drunk with musical honours, announced that some £200 had been promised to the new fund that evening, bringing up the total promises to £1,528. He also announced that he himself would pay the cost of the first flat.

Tests for Apprentices

THE scientific examination of the mental fitness of apprentices in the printing industry has been made a compulsory test for admission to the Toronto Typographical Union, and in future no youth will be accepted for membership until he has passed a set of psychiatric tests. It is stated that no other labour union in the world has insisted on such mental tests for its future members.

Surprising Indictment of British Manufacturers

What have Printing Machine Makers to Say?

AFTER a terrific fire in Montreal Charles F. Dawson, Ltd., suffered the total loss of their printing and stationery manufacturing plant, together with a magnificent block of buildings.

A letter from Mr. C. F. Dawson to Mr. Percy Barringer, President of the Stationers' Association, gives a very graphic description of what happened, and we are permitted to quote from this as follows :—

" On the night of the fire the temperature was 20 degrees below zero (52 degrees of frost) —the kind of weather in which we Montrealers revel in winter. Bright, clear, sunny days; brilliant, starry or moonlit nights, and a dry, cold, bracing air that makes us glad that we are alive. After the firemen had poured water over the ruins for some thirty hours the ice effect was wonderful. I send with this a photograph showing the appearance of the front of the building after the fire was out. The objects leaning against the wall are fire ladders, completely encased in ice; they were retrieved by means of live steam from a portable boiler and a flexible hose pipe.

" The building had complete sprinkler fire protection, which is chiefly advantageous in securing lower insurance premiums. Although this system is efficacious in an incipient fire, it is absolutely useless in a conflagration of this magnitude.

" A close examination of what salvage there is, is instructive. The type is all gone, partly volatilised, partly in a solid mass; also the monotypes, the book sewing and the ruling machines, together with the perforators, punchers, pagers, folders and stitchers also are destroyed. The stamping (or blocking) machines, used for stamping gold, ink or leaf on cloth cases, are in fair shape, owing to their massive construction, can be used again with some additional parts. Only two of the cylinder presses can be repaired at some expense, and will in future be used on the cheapest class of work. The platens and automatic presses are mostly wrecks. But the chief loss is in the destruction of the records of upwards of eighty years. They were, of course, invaluable to us only, but possessed no insurable value, and cannot be replaced.

" The value of the plant was well over $100,000, fully covered by insurance, so that the chief loss will be the two months that I am out of business. New premises have, after some search, been selected—in many respects more advantageous than those destroyed. They are larger, isolated, sprinkled, with two floors only, 100 x 100, or 20,000 square feet in all. The plant will occupy the whole building, and will not be subjected to the fire hazard of co-tenants or neighbours. The shipping facilities are very good, and when things have settled down again without doubt I shall be glad of the change. The ground floor is in reality the ground; this, with upwards of ten inches of concrete and a covering of hard wood, will make an ideal floor for the heaviest

printing machinery. I have taken a long lease of the property, with an option of purchase at some future date."

Then follows this amazing account of the purchase of new machinery:—

"The new machinery has been purchased entirely in the United States, chiefly on account of the nearness and the promptness with which machines can be delivered. But there is another and more far-reaching reason—at the present time after being in this business for over forty years, I do not know the name or address of a single British manufacturer of machines in my line, or where to purchase even as simple a thing as a board shears or a section folder.

"There seems a desire to hide their light under a bushel, quite out of keeping with modern methods. I did correspond with a couple of firms last summer, but their methods did not suit me. One wished me to 'indent through a London merchant,' and the other wished to sell either on a cash with order basis or else on a cash against documents arrangement. The enquiry was promptly called off, as no business amounts to anything without a certain amount of mutual confidence, and as they were unwilling to take a chance with me, there was no good reason why I should take a chance with them—more especially as I furnished some perfectly good references, and they did not.

"The U.S. manufacturer, either through a local representative or a traveller from his head office, keeps the users and prospective users of his product fully informed about it. There is a constant succession of circulars, instructions, illustrated printed matter, sample of work done by the machine, lists of satisfied users, with addresses (with urgent requests to write to any of them about it), photographs, etc. Is it any wonder that the Harris offset, the Miehle cylinder, the Lanston monotype, the Merganthaler linotype, the Chandler & Price platen, and numberless others enjoy a patronage that extends beyond the United States and Canada to world-wide proportions, including Great Britain itself. At the present moment the only typefounder's specimen books in my possession are American ones. And since the fire every firm of any magnitude has sent a representative all the way to Montreal to get his share of the orders being lavishly distributed.

"My Imperial tendencies have quite got the better of me in writing such a lengthy letter, and I confess to a feeling of regret that I have bought where I should not have bought, and I have not bought where I would like to have bought."

We await with great interest any reply our British manufacturers may make to Mr. Dawson's complaints.

A Fine Piece of Book Printing

MR. GEORGE W. JONES has just produced at the Sign of the Dolphin a beautiful piece of book-making. It is a volume 12¾ by 10¼, of 110 pages, of a poem called "Gilgamesh: A Dream of the Eternal Quest," by Zabelle C. Boyajian, published at 42s. net. Our readers may not be interested in this literary presentation of the Babylonian epic, but they will be interested in the exquisite way in which it has been presented to its readers. The book is illustrated with a number of Assyrian and Babylonian bas-reliefs, printed in colour, including gold, which add greatly to the charm of the book.

The planning of an illustrated book is an interesting occupation, but to secure harmony between the text and illustrations, if they are not designed to be part of the book, is indeed a problem presenting many difficulties.

Gilgamesh is set in Venetzia type, which was recut for Mr. George W. Jones by Prince, with the object of reproducing the beauty of Jensen's famous Roman fount. The legibility and freedom from disturbing elements is shown to excellent advantage; the final appearance is further improved by fine press work and the use of Abbey Mills antique for the text pages. There is always beauty in a page of solid type well set and properly printed, and the prose pages, with their ample margins, are worthy of the Jensen model. The opening page of each act is embellished by the use of a handsome initial and headpiece, recut on wood from some of the original prints taken from the extensive collection of early printed books in the library at The Sign of the Dolphin.

The colour plates are mounted on a dark cover paper, and scattered through the volume to face the text. Their importance justifies this treatment, though some may feel that the dark paper slightly disturbs the beautiful harmony of the production.

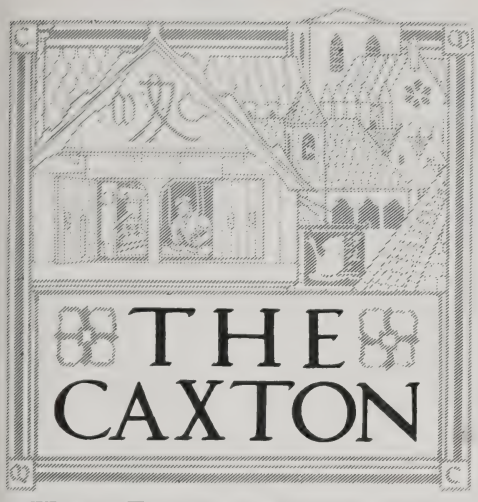
Mr. George W. Jones has done many useful things for the printing craft, but they are mostly in branches other than that of book-making. We hope that he will see his way to undertake more work of this kind, and continue to apply his receptive mind to the task of incorporating in the modern book the spirit of the old masters, combined with a sympathetic interpretation of the spirit or atmosphere of the subject with which the book deals. If he will do this he will still further increase our indebtedness to him.

Prizes for Posters

A PRIZE of 5,000 f. for a poster to advertise the work of the Red Cross in time of peace is offered by the Ligue des Societes de la Croix-Rouge (2, Avenue Velasquez, Paris (VIII.), which will also buy a number of the unsuccessful designs at 500f. each. The competition is open to artists of all countries.

Honour for Mr. E. G. Arnold

FOLLOWING a complimentary lunch given to him in Leeds last month, Mr. E. George Arnold, LL.D., was presented with an illuminated address by Mr. J. A. Stembridge (Chairman), on behalf of the Leeds and District Master Printers' Association, congratulating him on the honour recently conferred upon him by the University of Leeds.



London, April, 1925

The Strike

FOR a claim of five shillings a week for five men—i.e., 25/—which had already been thoroughly and impartially investigated and rejected, the whole printing industry has been thrown out of gear, and its absolute stoppage seriously threatened. And after further protracted discussion, this claim has again been refused.

It is not for us to take sides between employers and employed. The history of this journal would show that its policy has been impartial, and that its efforts have been directed very forcibly at times to the setting up and perfecting of a piece of machinery which would not only be able to settle disputes, but which eventually would make a disturbance such as we have just passed through impossible.

For that reason we are glad that the leaders on both sides insisted on the dispute being handled from start to finish by the Conciliation Committee of the Joint Industrial Council. It would be folly to set up this strong and effective instrument for this very purpose and then, when it was to be really and thoroughly tested, to hand over its function to a Government Department which would necessarily know very little about the details of the dispute, and which would possess no better qualities for dealing with it than our own experienced and able leaders on both sides of the table.

The fact that the Conciliation Committee had already given a verdict on the main factor in this dispute, and that the strike was called in defiance of it, was an additional reason for an insistence upon the rightful authority of this body being strongly asserted and exercised.

A WARNING.

It is true an absolute stoppage in the printing trade was avoided, but the moral effect has been as though it had not been avoided. The impression left upon large numbers of men has been very deep and serious indeed. Particularly upon men not prominent in trade politics. We have canvassed the opinions of some such men, and their position summarised practically comes to this :—

> "We are having a bad time. The general trade depression affects us at once. In the coalfields, in the steel and ironworking centres, where these particular industries keep hundreds of printers going, there is hardly anything doing. Competition is keener than ever. We are burdened with expensive machinery, which standing idle represents a definite loss; we take work and often make nothing out of it save employment for our men. We are not making fortunes. There are lots of the employed making more money than we are. We are burdened with care and anxiety. Our businesses would not stand any additional strain, and it seems to us that for Trade Union leaders to go to rich and flourishing newspaper proprietors and gain concessions which they cannot afford to refuse, and then come to us and use these as a lever, is unfair. Nor do we think that disputes about a machine of which we have never heard, and work which we never do, affecting a handful of men, should be allowed to throw out of gear the whole industry of the country. Many of us are very weary of it all. We are not inclined to suffer much more of it. A cottage in the country would be a delightful escape. Our ambitions are curbed and our initiative killed."

That really does represent the feelings of many. The serious part of the prevailing discontent is that the heart is being taken out of men. One printer—not a small one either—said last week : "If I have to close my works for two weeks, I will never open them again." There is a lack of enterprise. Some are taking capital out of the business instead of putting more in. And all this is bad for trade. If the workers imagine there is a certain amount of printing which has to be done, and if one firm doesn't get the order to do it another will, and that makes up the printing business, the sooner the better they learn sense.

Printing business is created. Men go out and make printing possible. If the initiative, the suggestion, of the printer were removed, the unemployment books of the Unions would be much fuller than they are. We must face facts, and the case in a nutshell is this : Printing is expensive, trade is bad, and, if printing is to be more expensive, there will be less of it. To imagine employers can concede everything to the workers, and then automatically pass the additional burden on to the customer, is a foolish delusion—because there would be no customer !

THE REMEDY.

Some way out will have to be found. We are in no worse or better case than other industries so far as difficulty goes; we are in better case so far as our opportunities of facing up to these troubles go. We are rich in men of great prudence, keen intellectual ability, and the will to do. It would be possible, as we have said before, to form a panel of men from the Federation and the Unions which might not only find a way to establish an almost ideal compromise in our own industry, but at the same time show the way to industry as a whole.

AGREED STATEMENT

The following agreed statement was issued on March 30, under the signatures of the officials of the Federation and the National officials of the Paper Workers' and Binders' Union:—

"We are glad that this dispute is now satisfactorily ended, and we think it is desirable to issue a joint brief report of the ultimate settlement, for the information of all concerned.

"Mr. G. A. Isaacs (the Chairman) and Mr. A. E. Holmes (Joint Secretary), on behalf of the Joint Industrial Council, early last week invited the negotiating committees of the Federation of Master Printers, the London Master Binders and the National Union of Printing, Bookbinding, Machine Ruling and Paper Workers to meet the Conciliation Committee of the Joint Industrial Council and endeavour to find some means of settling the dispute. Protracted negotiations under the able chairmanship of Mr. Isaacs, took place on Wednesday and Thursday last, the final sitting lasting from 1 p.m. on Thursday until 5 a.m. on Friday.

"A settlement satisfactory to both sides was ultimately reached, largely as a result of the influence of the Conciliation Committee of the Joint Industrial Council, and the principal points of the agreement are given below.

"It is gratifying that this serious dispute, which had most dangerous possibilities, has been settled within the industry, without the intervention of any outside parties. The main object of the Joint Industrial Council is to prevent disputes, or, if they arise, to find a satisfactory solution. The negotiations of last week prove that the Joint Industrial Council can be of very considerable service in dealing with difficulties in the printing and binding trades, and its usefulness has been recognised by all the parties to the dispute.

Federation of Master Printers.
President: W. B. Wykes.
Secretary: A. E. Goodwin.

National Union of Printing, Bookbinding, Machine Ruling and Paper Workers.
President: G. Harraway.
Secretary: T. G. Newland.

"The chief points in the agreement are:—

"It was agreed that the employers' organisations and the Union nationally and locally, and all their branches, sections and chapels, shall respect the constitution of the Joint Industrial Council, and will take no aggressive action of any kind, until Rule 26 of the J.I.C. dealing with disputes is fully complied with.* This means that no strike, lock-out or other aggressive action can take place until the matter in dispute has been referred to the Joint Industrial Council, and their efforts have failed to secure a settlement."

**Extract from Joint Industrial Council Constitution, Rule 26.*

In the case of any dispute of a local character, as defined by Rule 18 (District Committees), no strike, lock-out or other aggressive or coercive action shall be taken until the matter in question has been placed by the consent of the parties before the District Committees, or failing such consent, before the Conciliation Committee of the Joint Industrial Council, and pending such reference, the dispute shall remain in abeyance, the members of the Union (or unions) to remain at work, and the employer (or employers) concerned not to persist beyond the point of protest. Both parties shall conform to normal conditions pending the reference. In all cases the District Committee must be notified of the dispute.

A New Process

By Mr. RONALD TRIST

THE investigations of Mr. Ronald Trist towards a new printing process have been referred to on several occasions, but very little information has been forthcoming. The use of the known property of an amalgam to repel ink has been recognised as a feature of the idea; if a copper plate be exposed to the action of mercury, an amalgam is formed, and where this compound exists printing ink is repelled.

A method by means of which a printing surface of this character may be produced is described by Mr. Arthur Ronald Trist, Dinneford House, 12, Clipstone Street, London, W.1, in a patent specification No. 225,928/1923. The following are the details:—

"The invention relates to the preparation of mercurial printing surfaces in which the printing areas of the plate are formed of metal which will not amalgamate with mercury, whilst the ink-repelling areas are formed of a metal which can be mercurised. As the mercurised metal of which the ink-repelling areas are formed wholly supported and maintained in position by a metal unaffected by mercury, there is no tendency for the mercurised metal to be removed.

"A flat iron plate is given, by electrical deposition, a layer of nickel, say one-thousandth of an inch in thickness. The nickel surface is coated with bichromated fish glue enamel and a print is taken from a negative. After exposure, the print is developed and baked in well-known manner. The plate bearing the baked bichromated fish glue enamel picture is then treated with perchloride of iron or similar etching agent, until the thickness of the nickel is locally reduced from one-thousandth of an inch to between five and six ten-thousandths.

"The plate is then washed and the exposed areas immediately electro-deposited with some metal with which mercury will amalgamate, such as copper, silver or gold, or preferably copper and silver successively. The baked bichromated fish glue enamel is then removed by means of a suitable alkali and the plate is treated with metallic mercury, which will form mercurised areas at those parts where the copper, silver or gold deposit is situated.

"It is essential that the material deposited after the etching treatment shall produce the non-printing areas, inasmuch as when such deposit is effected a slight upstanding ridge is formed about each individual area deposited. This ridge, however, is quickly amalgamated and removed by the mercury treatment, resulting in a truly planographic printing surface."

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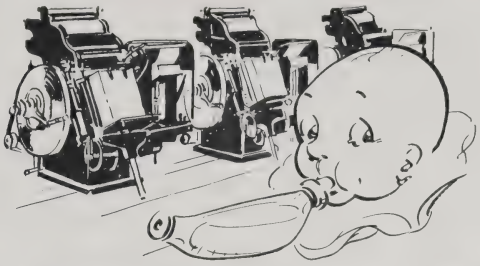

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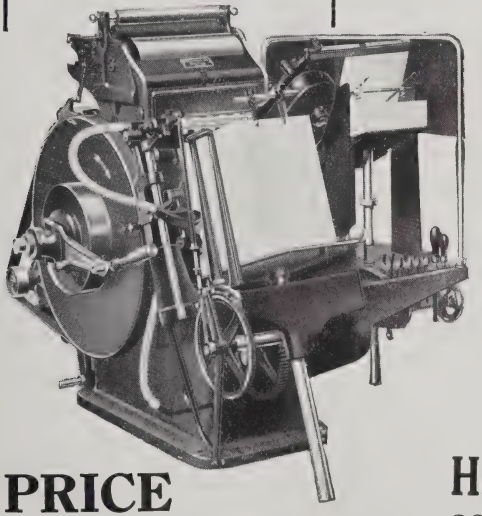

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MANCHESTER—G. Hartley & Sons, 131, Gt. Bridgewater Street.
LEEDS—E. Bush & Sons, Crown Point Road.
LIVERPOOL—John E. Parry, 4, Back Russell Street.

Reviews

Printing and Printers in Wales and Monmouthshire. By Ifano Jones. William Lewis (Printers), Ltd., Cardiff, 1925. Royal 8vo. Pp X + 367. 25s. net.

THE full title is "A History of Printing and Printers in Wales to 1810 and of successive and related printers to 1923. Also a History of Printing and Printers in Monmouthshire to 1923." The author is the Welsh librarian, Cardiff, and the volume is produced by the assistance of the subscribers, to whom it is dedicated.

In undertaking this enormous bibliographic task, the author had in mind the importance of preserving an authentic record of printing in Wales.

No detail has been omitted, even though unimportant to-day, because small happenings may be of vital importance to the historian of the future. Such a record is not likely to prove interesting to the general reader, although those who are associated with the names that are recorded, and also those who have made a study of the subject will find the work of value. The records have obviously been made with scrupulous care by a careful bibliographer, and the footnote references and the copious index make the book easy for further study or for reference.

The only items of general interest refer to the introduction of printing into Wales, and a chapter is devoted to arguments relating to the origin of a printed penitential missive or letter of indulgence issued by the Abbot of Strata Marcella. The author comes to the conclusion that the document was printed by Richard Wyer at Westminster in or before the year 1529. He appears to dispose of the contention previously held that it was the work of Pynsen. The first press was established in Wales by Isaac Carter at Trefhedyn, or Adpad, in the year 1718.

As a piece of book-making, the volume cannot be described as satisfactory, and is to be regretted that such an important work should not have been printed in a better way. It is set in the Cheltenham series which, although still useful commercially, can scarcely be accepted as a good book letter. Many of the pages are disturbed, too, by the use of a bold Roman for names and portions of chapter headings. Emphasis might have been secured in some other manner which would have been less distracting.

Modern Photographic Reproduction Methods. By Charles W. Gamble, M.Sc.Tech., Municipal College of Technology, Manchester. 1924. 1s.

THIS brochure is a reprint of a lecture on the subject, and it is useful to have the matter preserved in such a pleasant form. Incidentally the type is linotype set, and printed in the printing department of the College, forming an admirable example of the high standard of taste and craftsmanship which the department maintains.

Mr. Gamble has been associated with the growth of photo-mechanical processes for a large part of the period covered by their commercial use, and his recital of the present position is of undoubted value. A sense of historical proportion, coupled with the trained analytical mind of the teacher, enables him to present the story of the growth of the processes and their relationship to one another in a congenial way.

The lecture covers the whole subject from its early beginnings to its latest applications, and is crowded with crisp historical statements that are extremely useful in their present concise form. We wish a bibliography could have been added to make the service to students complete.

It is customary for the reviewer to look for weak spots, and after much searching we find a reference to irregular grain screens, sometimes used in block making, in place of the ordinary ruled screen. It is stated that there is a loss of detail when this type of screen is used. Although this is true as regards screens in use at present, the defects are not inherent in irregular grain screens as such; it is probable that improvements in manufacture will give us a screen as good, so far as resolution is concerned, as the standard ruled screen, and we feel sure the author would be among the first to welcome such a screen which would take away from the "sameness" of halftone reproduction. On this subject the lecturer says: "There is a certain stamp upon the work of the camera which at once proclaims its origin; it is, to use a well understood term, 'photographic,' and, however clever it may be, its interest is limited, and may even give way to tedium. This is not affectation of 'superiority,' but a genuine feeling, and one which is shared by a considerable number of people of differing degrees of education and taste."

In speaking of high-light halftone negative making for photo-lithography, we agree that high-light negatives are no more difficult—or perhaps easier—to make than those for block making, but there is another point to consider. In block making errors in the negative are corrected by the etcher, whilst in a great deal of photo-lithography there is no opportunity for correction, particularly on the plates after they are printed down.

Mr. Gamble's comments on the reasons for the slow adoption of photo-lithography by the lithographic industry will be accepted as an accurate statement of the case, and places the improvments in printing machinery among their number as well as the working out of more perfect technical photo-litho methods.

Lest we should forget that photo-mechanical work does not embrace the whole of the reproduction processes, we are reminded that "in the interest of truth, it may be said that neither for accuracy nor for quality do the photographic processes exceed in value the printing surfaces produced by the unaided hand of man." In our view every effort should be made to encourage wood engraving or wood cutting and auto lithography by really clever artists; the wood cutting societies are showing us the way in the one field and Pennell & Brangwyn, among others, in lithography. The scope for the auto lithographer has increased enormously with the lithographic revival, and in our haste to improve *photo* lithography *auto* lithography is being neglected.

But why should the artist's work be reproduced when it might be drawn direct on plate or on stone?

The Master Printers' Annual.—This invaluable and handsome volume for 1925 came to hand just too late for notice last month. But we still recommend printers to buy it. It is the printers' Blackstone, containing all the information the average printer is likely to require in the course of the year. A new educational section has been added, containing a list of the chief printing technical schools, and the Historical Section is continued covering the most interesting events in the printing trade of this country between 1860 and 1900. The book is edited as usual by Mr. R. A. Austen-Leigh and Mr. Gerard T. Meynell, and is beautifully produced by the Westminster Press.

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On RIGHT hand side of Entrance Hall.

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7 & 8, Plumtree Court, Farringdon Street, LONDON, E.C.4.

TELEPHONE: CENTRAL **391.** TELEGRAMS: GILINKBY, PHONE, LONDON.

CRAFTSMAN'S CORNER

Devoted to plain, homely talks about Letterpress Printing. Design, layout, type, composition, illustration, paper and ink will all receive attention as occasion demands; and Specimens sent in for Review which contain features of special merit or interest will be reproduced in these columns.

CONDUCTED BY H. B. NAYLOR.

COLLECTIVE ADVERTISING! Ask your neighbour for what it stands, and he will probably tell you that it means advertising a trade as a unit, instead of the units of the trade advertising independently. This is not quite correct; because generally the units of the trade concerned are left with a free hand to advertise at their own discretion as well. Therefore, Collective Advertising is an adjunct to, and not in restraint of, unit advertising.

Collective Advertising is to be found in the National Press, as well as in booklets, window bills, etc., advising you to "Eat more fruit," "Drink more milk," "Travel by Underground"—these are appeals to taste, health, and comfort. Then we are invited by the Commercial Gas Association to consult them, free of all charge, on anything we desire to know about gas and its fittings. Seaside and country holiday resorts extol the virtues of their climates and the beauties of their particular parts of the country, in booklets which may be had free for the asking. These are all schemes for creating sales and enticing you to spend your money—it is up to you to see you get value in exchange!

A slightly modified form of Collective Advertising is where the wholesaler advertises his goods, but does not sell direct to the public. Such an example is Wolsey Underwear. Wherever drapery advertisements appear in mass, there will constantly be found such slogans as "For warmth and rest, Wolsey is best," "Wolsey is the article that's British every particle," "Wolsey Underwear is best, it survives the laundry test"—nothing else in the advertisement, not even a name and address in *very* small type. But the public has become accustomed to the word "Wolsey," and *will* ask for it at the counter. So the wily wholesaler almost forces the retailer to stock Wolsey wear in anticipation of the demand which he has set out to create.

The same principle is applied to patent medicines, proprietary or branded tobaccos, patent foods, and a host of other goods too numerous to mention—campaign advertising practically creates the desire to buy; and the retailer who does not stock such goods not only loses trade in these particular lines, but may lose business in other directions as well merely because customers prefer to make all possible purchases at one shop. Consequently, we see the windows of the chemist, tobacconist and grocer plastered with bills, showcards, and other "aids to beauty," announcing that he *can* supply the popularised-by-advertising commodities. This is advertising also.

And so it is with Collective Advertising in its broader aspect: it by no means implies an act of economy on the part of the syndicates concerned just because they pool the costs of the campaign; its main object is to create, popularise and increase demand for the commodities advertised. The units (or separate firms) of these syndicates still have to secure their orders through the mediums of competition and service, and may still run separate advertising campaigns. The extent to which this is carried on to-day suggests that it must be a paying proposition.

Now we find the Federation of Master Printers going in for Collective Advertising. And why not? Despite the vast amount of Printing turned out to-day, buyers of printing still require educating up to the fact that Printing is something more than a mere mechanical process—it is a highly skilled art requiring years of study and practice before one can become a printer of repute, who can produce print efficiently, satisfactorily, with a punch in it, at a fair price.

This, apparently, is what the F.M.P. are setting themselves out to explain through the medium of a series of booklets, the first of which is most aptly entitled "Booklets that Make More Business."

I am going to assume that most printers have seen a copy of this booklet; but as a reminder the front page of cover is reproduced herewith—see Example 31. I do not propose to criticise this production or its contents. Some reference to the latter, however, may not be considered out of place; but in this little article I am more concerned with the printer on whose behalf this booklet is issued—and it is more to him that I venture to address my remarks.

The subject matter of the F.M.P. Booklet (Example 31) has been arranged in convenient sections, each with its own cut-in heading, informative to the buyers of printing; but if we will only take the trouble to read between the lines and analyse their meaning, we shall find much helpful information for the conduct of one's own business.

Take the first heading, "What Exactly is a Booklet?" Answer: "The booklet is usually what

may be termed a commercial narrative, a story of some article of commerce agreeably written and enticingly presented."

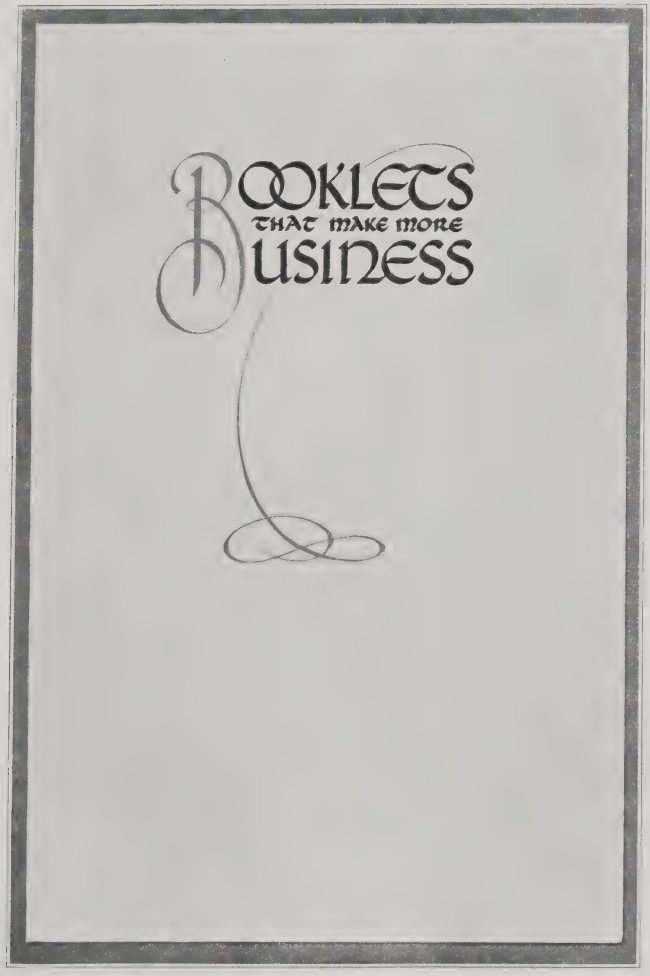
Now, Mr. Printer, please bear this in mind when you issue *your* booklet; remember, you are not issuing it to please yourself, but are addressing yourself to your prospective client and endeavouring to show how you can help him to increase his trade by the printed word. (By the way, it is up to you to make sure of *your* ultimate profit.)

Heading No. 2: "The Business of a Booklet." Answer: "The booklet is first, last, and all the time a selling instrument, and should be conceived, produced, and distributed with that fact always in mind."

Mr. Printer, do not prepare *your* booklet with the idea of initiating your prospect into all the mysteries of our craft—that is our concern, not his—but it is quite permissible to educate him up to the point of appreciating what is good printing, and the efficient service you are able to place at his disposal.

Heading No. 3: "The Booklet, the Advertisement Unlimited." Explanation: "A well-written booklet, finely illustrated, takes a showroom or window display, and a persuasive salesman, into the homes and offices of your customers where its beauty makes it welcome. . . . With direct advertising you can choose your own target."

This last sentence is a power in itself. Whether you specialise in bank printing, commercial stationery, or for the cinema, or any other trade such as engineering or dry goods—these are almost exact opposites—the arguments or suggestions which



Example 31—Front Cover of a Booklet issued by the Federation of Master Printers in conjunction with their Collective Advertising Campaign.

Full of useful information to Printers as well as to Buyers of Printing—Reference to some of its contents will be found in these notes.

readily lend themselves to the one class of client may possibly be wasted on the others. Style of treatment as well as style of appeal should be adapted to suit the occasion.

Heading No. 4: "Informativeness is Indispensable." Explanation: "Any ordinary catalogue is full of information, but this is all of a very obvious and matter-of-fact kind. The informative booklet is different. It will certainly give a good deal of useful information directly bearing on the goods to which it relates, but it may also devote considerable space to other related matter which there is reason to think will be helpful to the class of reader for whom the book is intended."

This may be exemplified in the following manner. Many printers are amateur gardeners—some are very efficient indeed in this direction, and have long realised that it is an excellent antidote for the worries of the printshop—and they are aware that the National Press is just now teeming with advertisements relating to the garden, each of which is trying to persuade the reader to buy from some particular nursery, the proprietors being *almost* too willing to send their new catalogues free of all cost to any inquirers. The inducement held out to write for one is because some of them include valuable hints on gardening in its various aspects, whilst others specialise in certain directions. If the printer in his booklets can show his customer how his business can be helped, it is more likely to influence orders than if the booklet were full of cap. I's. Reference to one's own business is permissible in such a booklet, but it should appear as if subservient to the other interests concerned.

Heading No. 5: "Booklets of Suggestion." This heading has an interesting explanation: "A firm in the 'gift-goods' trade once issued a specially effective booklet under the title of 'Social Suggestions.' This contained sections on 'The Engagement,' 'The Coming Wedding,' 'Wedding Preparations,' 'What the Fashionable Man Should Wear,' etc. A booklet on these lines would be a useful selling aid to anyone concerned in the sale of requisites for such occasions."

Suggestions on such lines are almost infinite. It may surprise many of my printer friends to hear that some advertising agencies do quite a large amount of business in this direction. If they can do so, why shouldn't you? But you must equip yourself for it. Decent dummies must be got out, which should look as real and natural as possible—they should have a good cover *and* good inset paper. A knowledge of photography and block-making will be most helpful; and, above all, a keen imagination and ability to give it expression without running up unnecessary costs.

This M.P.F. Collective Advertising Booklet contains many other headings, such as "What Booklets Can Accomplish," "The Service Booklet," "Colour in Booklets," "Novelty Booklets," "Art and Illustrations," "The Envelope," "How to Plan Your Booklet," and "Four Methods of Distribution"—all have a moral well worth thinking over; but I propose to pass these over now, and deal only with the final heading.

Heading No. 6: "Consult Your Printer." This is well handled in the M.P.F. Booklet's concluding paragraph as follows: "Consult your printer in the early stages of your job, and out of his practical experience he will advise you how to get the best results at the lowest possible expenditure."

It is one thing to advise your customer to do this; but quite another matter to be able to do so without seriously detracting from its capacity to attract business. How many printers are equipped to plan a booklet throughout—copy, design, style, etc.? If the printer recommends consultation with him on such matters, he must be prepared to be able to advise, and feel fairly sure of his ground.

And whilst he is preparing to cope with originating, let me put in a plea for certain members of his staff who are well able to do such work if given a reasonable opportunity—there are large numbers of such employes who are thoroughly capable of doing this work, and yet are literally starved! You, Mr. Printer, are robbing yourself of better value for money paid in wages or salary, and the man is baulked of an opportunity for advancement. Look around your own office before seeking elsewhere for it, and you will probably be surprised at the talent lying dormant, only waiting for that encouraging word to go forward and help bring more grist to the mill.

Now for just a few comments on the subject generally.

In an editorial article in The Inland Printer for February, Mr. A. L. Lewis is quoted as making use of the following question put by a sub-committee of experts: "What can printing do for business?" (This might be answered by asking another question: Where would business be nowadays without printing?) The editorial note then goes on to state: "It is a certainty that when printers start thinking about the possibilities and potentialities of their product to the same extent as in the past they have to the mechanics of producing it, they will find many opportunities for creating business that they otherwise would not get. They will also find it more profitable, and will not have so much cause for worry about competitive bidding and cutting prices."

This hits the nail on the head so certainly that master printers in this country as well as in America would do well to thoroughly absorb it and then put it into practice. Cutting prices! This is only another way of giving your legitimate profits to the other fellow! Healthy competition is good for every trade: it encourages efficient service, up-to-date plant, and keen business instinct.

The Bard of Avon knew a thing or two when he caused the Duke of Norfolk to caution the Duke of Buckingham (in Henry VIII.) thusly: "Heat not a furnace for your foe so hot that it do singe yourself."

The well-equipped and well-served printery has little to fear from competitive printing. The law of average will surely bring along a fair amount of work; and if one specialises—and with it sprinkle a little of the spirit of enterprise—then it is quite within the realms of possibility for the law of average to be easily surpassed.

But do not let your salesman down with inferior productions for his stock-in-trade; do not send him out—as I have known it to be done—with badly-printed, badly-displayed, *and* illiterate business cards for the sake of that little extra attention to

detail or slight extra expense. You start him off with a serious handicap; and you really cannot blame him if he brings in work at a price which self-respecting printers would turn down with a sneer.

The "local" printer can easily enhance the value of Collective Advertising by advertising his own business in the local press—generally an inexpensive proposition—and cater more for local work. There are numbers who trouble very little about this, yet at the same time think nothing of going into the next town or village in search of orders. Someone gets the local work, why shouldn't he? If he cannot get it, it is up to him to find out why. If it be a question of price only, look round the shop and find out from whence the difference in price emanates, and try to put it right.

Collective Advertising is an aid to more business; but it does not warrant any individual sitting down and waiting for the work to roll in. Collective Advertising does not exempt him from further effort in this direction, even if he does contribute his share of the cost.

Another pitfall is estimating. Whenever it is known that a job is "going round," the get-together spirit should be encouraged to its utmost. Why not be frank with your likely competitor and talk it over?—the other Richmonds in the field are frequently known. To reduce a price through efficient organisation and an expert knowledge of requirements must not be confounded with price-cutting. The M.P.F. now has branches all over the country—why not make full use of the meetings to discuss the question of estimating with brother printers? Campaign work will make but little profitable headway if the units are constantly fighting one another.

It is always far more satisfactory if inquiries and direct results can be traced to any form of advertising. That is why many of the big Press advertisers key their advertisements, and include coupons inviting the public to write for samples. It gives them some indication of whether their advertisements are sufficiently attractive and convincing to create response. I know of actual instances where thousands of replies have been received from one advertisement only!

On the third page of cover of the M.P.F. Booklet is a paragraph inviting the recipient to write up for successive booklets. It is astonishing, but true, that as soon as you ask some folks to use notepaper and envelope, the spirit of indifference immediately manifests itself. I would like to suggest that a postcard accompanies the next piece of literature, either as an enclosure or tear-off, all ready for despatch, merely requiring the sender's name and address to be inscribed thereon. (By the way, this method, owing to uniformity of size, helps the records to be more uniformly filed for reference.) One does not care to encourage mere indolence or inquisitiveness; but the easier it is made for the prospect, the more likely is a contact to be made.

Enough has possibly been said on the subject of Collective Advertising for the present; so the rest of the space at my disposal will be allocated to

APPRECIATIONS.

BAINES & SCARSBROOK LTD. (SWISS COTTAGE).—Your calendar presents a sound, attractive, and durable colour scheme: and the illustration, although technical in its reference, is of sufficient historic value to be of general interest. You have gone to a lot of trouble in mounting both on the back and front, but it is worth it. There is one point which I might be permitted to criticize, and that is, there is the suggestion of an invitation to "Printers with Original Ideas" to "Ring up Hampstead 246." Similarity and spacing of type and the date pad help to convey this inference. If the positions of the address and 'phone number were reversed, and the lines of the latter brought a little closer together, this "illusion" would not appear—besides, it is more natural to read name, business, then address. You are certainly justified in feeling proud of this piece of work.

BEMROSE & SONS LTD. (DERBY).—Your two desk calendars are neat and useful. I like the daily pad with its Shakespearian quotations very much. They may be conventional in style and get up, but for readability and size leave nothing to be desired. The postal information and complete calendar at back are handy, so also are the emergency hangers.

The Commercial Almanac contains too much on it. Ostensibly for mounting and hanging on the wall, it contains a quantity of valuable everyday information in small type that would require a position within close range of the eye for quick reference; and this, because of space it would require, is not always conveniently available. Otherwise it is an excellent get-up, and in design would make a fine basis for a standardized church calendar.

E. G. BERRYMAN & SONS LTD. (GREENWICH).—Thanks for March "Impressions." This is a lively little booklet, crisply written and easy to read. If I might suggest an improvement for the next issue, take *at least* 12 pts. out of the back, and put another 6 points in the head. This will allow more head and fore-edge margins, and make the appearance more consistent with the deep foot margin. At present, the heads, backs, and fore-edges are too uniform. If I have not made myself clear, drop me a line and another copy. I should like to see a copy if you alter it.

G. & J. KITCATT LTD. (HATTON GARDEN).—Your two samples are to hand via the United Advertising Service Ltd. The blotting wrapper is excellent for design, directness of message, and colours, but I am rather in the dark as to its exact intention and use.

"A Link with Bridewell," with its deep-etched half-tone pencil drawing of Old Bridewell on front page, is quite interesting, but it is not every country printer who will see the connection. As there is *ample* room on the front page, I should like to have seen your name and address—"With the Compliments of" might be included—unobtrusively introduced as representing the "link." Your method of linking up on the inside pages is excellent.

I should be glad to receive a copy of your "Book of Impositions for Machine Folding."

LONDON SCHOOL OF PRINTING.—Your calendar bears excellent testimony to the good work you are doing in the cause of Technical Education. Lucky indeed are the students who are able to attend your courses of instruction. I cannot get used to the idea of having to turn over to the reverse side for the calendar; but I take it this is primarily an example of photo-litho-offset, with calendar on reverse side to give it utility value.

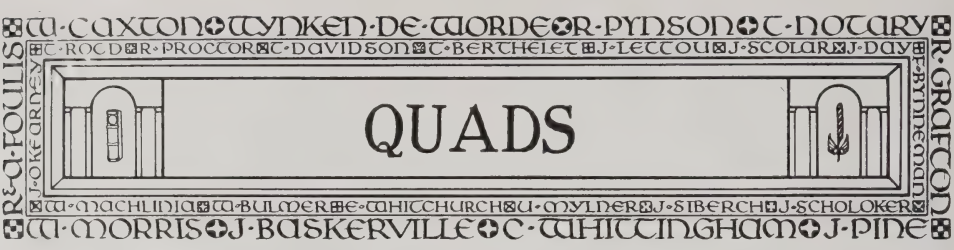
The "L.S.P. Record" is informative and well put together; whilst the booklet of testimonials fully accomplishes its object.

W. MARK & CO. LTD. (NORTHAMPTON).—"An Appreciation" looks very attractive. If you care to send me along another couple of copies I will submit a few suggestions for improvement should you contemplate a reprint. Please send them in a stiffener so that they do not get damaged in the post. Have you noticed the literals? Thanks for return of block.

R. S. OWENS (the musical compositor songwriter composer) has sent along another piece of music written and composed by himself, "Mother's the Queen of my Heart," published by The Stork Music Publishing Co. There is a homeliness about the words, and a lilt in the music of the refrain which suggests the author is a keen student of human nature.

R. SEED & SONS (PRESTON).—I hope to deal more fully with your Preston Liberal Bazaar Handbook in our May issue. It is a highly creditable production.

All specimens for review in "Craftsman's Corner" (noms-de-plume may be used if preferred), and all correspondence in connection therewith, should be addressed direct to H. Naylor, 8, Aubert Park, Highbury, N.5.



THE MacBemroses would have done better. If the jubilee of General MacBemrose had fallen in 1925 and the MacBemrose Centenary had been attained in 1926, the economical ordering of Providence would have been recognised, and one festivity outlay would have served for both celebrations; one lot of presentations; one McNificat.

BUT the Derby Bemroses are mere un-Mac'd Southrons. They had no zest for self-denying ordinances. They accordingly lately met together to shake hands with General Bemrose, and with everyone else whose jubilee of service with Bemroses had been reached. And the General and Mrs. Wright Bemrose entered into the spirit of the thing most delightfully.

When about sixty years ago General Bemrose's grandfather was to receive a portrait he literally fled five minutes before the presentation. Evidently his wife was not with him.

OVER seven hundred staff members signed an illuminated address to the General, and they presented him with his portrait in oils, by the Derby artist, Mr. Ernest Townsend. Whereupon the General, incorrigible even on such a jolly evening, told the company that not all portraits were successful. One lady who thought herself to be well up in Futurist and Cubist art said to a friend: "What a fine portrait that is of your husband in the hall." "Portrait of my husband!" the Mayoress exclaimed. "There isn't one." "Excuse me, I mean the picture on the left as you enter." "Oh," said the friend, "that's a plan of the drains."

THERE was not only at this gathering a jubilee General, there was also a general jubilee-ing. Framed certificates, in which the directors set forth the fact of the one therein named having completed fifty years' service with the company, were presented, with accompanying cheques. Twenty-two employes have already attained their jubilee; five others attain it this year—unless they give the firm notice meantime, and there is at least a fifty-fifty that they may not!—and seventeen others have more than forty years to their credit. Ten families have given continuous service through three generations.

OLD John Southward used to say to me thirty years ago, the Bemrose brothers are like the brothers Cheeryble. It looks like it.

NOR has a friendly disposition ruined them. Or General Bemrose would not now be chairman of the Universal Printers, a combination including a great house in Leeds, and another in Manchester, as well as the Derby establishment.

I SUPPOSE their first prosperity in the days of the first of the three Bemrose generations was based on the railroads. Hard "lines" you might think.

HAVE you sometimes thought of those first railway days. The lithoing of plans for the vast rail mileage that came into existence, and the vast rail lineage that didn't. Talk about grandfather. He didn't know that he was "hustling some." But, by George, he must have hustled for all that.

THE Bemroses, I imagine, could always be hurrying without worrying. Not all, however, of the old men had that gracious manner. And oh the weary hours and the lack of hope. Have you ever read Mrs. Gaskell's "Mary Barton," with its dreadful picture of the Manchester mill life of eighty or ninety years ago.

THERE'S a lot of uninformed unreflecting talk of the way the old employer knew and befriended the individual workman before limited companies came in with the sixties. Before, in the jargon commonly used, the "cash nexus" became the only bond. My reading and reflection indicate that the mean man, the unbrotherly man, was mean and unbrotherly a hundred years ago, and is mean and unbrotherly to-day. Thank God, there have always been men who cared for their kind; they have been found among employers and among the employed.

PARLIAMENT tries to make all employers do the fair and friendly things the Bemroses are reputed to have tried to do. The Bemroses of the world are to be held in honour for having done fair and friendly things spontaneously—of their "mere motion"—as royalties are at times made to say.

OF course, there were long hours at Derby as elsewhere; and I've no doubt a lot of little things, and perhaps even some big things, needed putting right from time to time. That I hazard as a probability. However that be, all I want to note now is the value of the friendly temper and spirit in industry, manifested on both sides.

How little we really know of each other. I was speaking about William Blades the other night, and called him, with words well considered, a great man. I said to my audience, and would repeat, that great men are greater than the greatest of their deeds. There is, as Browning reflects, the thing they would be and the thing they would do which elude their grasp, but none the less are true representations of the man.

I AM not thinking of mere amiability—far from that. Heaven preserve us in the craft from cowardice, which will let any bully have a bully-

ing way with us or from any other besetting weakness. A weak Government, said Edmund Burke, writing, I think a line of fine sense amid some reflections less fine, a weak Government turns out to be the most oppressive of all Governments. A weak firm, unless it mends, becomes bankrupt, and that as a rule amounts to oppressive conditions for all or some of its servants.

THE type I have in mind is rather that of my hero Arnold, "who loved his family as if he had no friends, his friends as if he had no family, and his country as if he had neither family nor friends."

THERE'S still something appallingly wrong with the world. The Emperor Nero fiddled while Rome was burning. The modern kings are not fiddling —but some of us are.

OR am I wrong as to that. Is it possible the fiddlers, the seeming triflers are really trying to befool their own disquieted hearts. "I made haste to laugh," said an old writer, "lest I should weep."

I STARTED talking the Jockey Club the other day with a world famous journalist, I might call him a sporting journalist, though he is more, who had just written a signed article upon that club and the fine sporting spirit which is instinct in all British race goers. We were at one on those points. But, if you please, in less than two minutes we were far away from turf topics, and at his leading. "I would like to rally the world to a new religion," he said. "If people would but agree on the incalculable debt the world owed to Christ, if they would just start there, they could troop off in being R.C.'s or Non-cons., or Plymouth Brethren or anything they liked, but we should at least have great common ground and common language." I think he was practically a Pantheist; most certainly not orthodox, but my point simply is that he was in dead earnest, and I think was in that typical of vast numbers who may seem to have no thought of anything but for the moment's affairs.

HE was awake. Compared with what we ought to be are many of us more than half awake? We are not touching life at enough points. That, I think, may apply to the most busy seeming.

SOMETIMES a man tells me he's got far too much to do; he's fairly snowed under; he's got no leisure; he's got no home life; and he may add that "ther's nothing to it after all."

YOU'VE met that man yourself. Perhaps he walked off with your hat the other day. Because it belonged to him.

JUST go up to the mirror, will you, and tell him from me that the remedy for doing too much is to do more. You can at least get a change of worries in that way, and that may be the next thing to a riddance of them. A master printer who leaves the desk where he's been fulminating against the folly or worse of some Ishmaelitish and ridiculously cutting competitor, or against some pur-blind sectionally selfish member of his staff, or some trade union, and who goes off to a Joint Council meeting and hears of a lot of other difficulties and contentions, or goes to a meeting of the town council on which he sits, and hears lamentable housing troubles, or to a meeting of guardians, and is immersed at once in tales of want of work and of demoralising doles—well, he is at any rate switched off for a time from his self-regarding ruefulness. He is provided with a new standard, too, wherewith to measure troubles.

He knows, too, that in the case of this other work there is something "hanging to it." A consciousness of playing a man's part in life: a conscious acquirement of useful experience and efficiency; a sense that he is making an investment of at any rate a part of his life in a "concern"—using the word in all senses, likely to yield a good interest; using that word also in all senses. He is pursuing in such efforts as are not solely self-regarding a purpose in which he cannot wholly fail; however slight may seem his equipment for his service, or however slight his apparent success; however much even he may be, so to say, knocked about in the struggle. At what price would a veteran keen fighter in public service sell, if they were vendible, the memories and tokens of the knocks he has received in doing his best for his kind.

"MY sword," said Mr. Bunyan's old Mr. Valiant, "I leave to him who shall come after me. My marks and scars I carry with me to witness to my king that I have fought his battles" . . . . "So he passed over. And all the trumpets sounded for him on the other side."

WHEN we are through the present Paper Workers' Union troubles, I hope the disposition will be not to make less but to make more of the Joint Council. Its record of action is so good that it would be particularly worth while to make it better. A programme of intensified activity would be my idea of what fitted the new situation.

I SEE that Oliver Lodge was broadcasting again recently. You and I may know about as much as each other as to just what electrons and protons are. We can't say they're altogether unimportant, as there doesn't seem to be anything else in the universe; at any rate atoms and the ether are said to be built of electrons and protons. Oliver Lodge says it is known that both are more massive when moving than when at rest. Their mass and energy increase together. And even if they receive a check, this addition which has come into being as an accompaniment of the energy is not lost. It becomes radiation, and travels on with the speed of light.

IT'S all suggestive enough to me to seem a fitting pendant to my hint. Don't belittle the Joint Council because of any seeming arrest of its functions and disappointment of some hopes. Put more energy into it. Harness the energy to new hopes and plans. See if there is not thereafter a conscious addition to the mass, to the weight, to the impressiveness of the Joint Council in the eyes of the craft. With some consequent useful radiation travelling with the speed of light.

THE Joint Council looks after the health of the craft. There's a most tremendous field for any amount of new energy. The provision of healthy uncrowded houses is a part of health study. That alone is a valuable pointer.

The Joint Council looks after apprenticeship. A very important pointer there. I have seen a little of the working of Juvenile Advisory Committees. My good Scotch friend, Mr. Dow, so long and prominently connected with Robert Hoe's, gave a portion of his well earned leisure to Juvenile Advisory work, Woolwich way. I wish I could think of great numbers of public spirited men in the printing world trying to render the like Juvenile Advisory service. It is appalling to think that there are very large numbers of lads and girls who have passed through three or four years after leaving the elementary schools without getting a job. When George Lansbury begins to declaim against the demoralisation of a-dole-and-no-work, it's time we did some harder thinking if we haven't been thinking hard as yet.

Recreation is another pointer. There's a sportsman spirit in the average man be his rank what it may. We should play together more than we do.

I think the Joint Council will stand the present testing. But none the less strengthen it after the testing. And in the best way—by the extension of services in common.

There are many things which printing workers of all grades might promote in common. Lets at them.

May I turn aside a moment to say a word of, and perhaps to, that well-esteemed and even well-loved friend of newspaper men, George W. Mascord, the controlling manager of the great house whence issues The Daily Chronicle and The Sunday News. Whatever trouble touches him nearly, is matter of concern to many in the home country and in Australia; I probably might add, and to a number of men on the Continent and in America. He has travelled far, and we are glad of it, for everywhere he has " carried the flag " of British self-reliance, self-respect and self-sacrifice.

A lovely daffodil-lined grave in God's Acre on Barnes Common has just received the body of his life companion. It seemed but the other day that I chanced to be in his office when his wife rang up (or probably someone for her) to gladden him with the news that that morning she had walked across the hall. For me it lit up that home life in a flash. I remembered, too, a dinner in honour of Mr. Mascord's completion of twenty-five years' Chronicle management; Sir Henry Dalziel, the chairman, expressed the general pleasure that Mrs. Mascord, though latterly a great sufferer, had braced herself to come among them that evening.

Left fatherless at six years of age, George Mascord began early to play a man's part. His early skill in typesetting helped him later to become quickly an expert on the linotype. This was at a time when he was one of the few forward-looking men who saw what the linotype would become. He worked for Thomas Hailing, of Cheltenham—one of the stimulating personalities of his own generation, and even of this; for the founder of Hailing's Circular and of the Printers' International Specimen Exchange is far from being forgotten. At Hailing's he received an invitation to join (or was it to re-join?) Greenwood & Batley, the well-known Leeds engineers. They were making the " Sun " printing platen. Young Mascord pointed out an important defect and early evidenced the inventiveness, the general mechanical power, with which newspaper men here and abroad have long been familiar.

A young girl of nineteen, the one who has just been laid to rest, adventured everything with and for her young husband, and eleven years they spent in Australia. A London daily paper owner, visiting Australia, brought back illustrated copies of dailies which Mr. Mascord, as mechanical superintendent, was producing. He showed these in London to refute newspaper managers who said that such results could not be obtained under daily paper conditions. Mr. Mascord was asked to come to The Chronicle in London. Thereupon his Melbourne employer, Mr. Syme, the well-known newspaper magnate, countered with an offer of a year's holiday at full salary. What I believe happened was that Mr. Mascord refused in any case to give notice to his Melbourne firm till a certain transition stage of their business had passed, and that then, with their grateful and hearty goodwill, attested in a farewell banquetting, he re-crossed the seas and assumed his present responsibilities. How he has transformed machines and machine accessories and even machine-room levels, and how he has altered old buildings and worked upon new buildings, and set up a great north country daily newspaper plant, all that would make a notable story.

But for another time. It is not of his achievements, but of his losses, I am thinking. Their only son lost in the war! The comrade of nearly forty years now also lost. There were many very beautiful flower tributes laid upon or near that Barnes Common grave—old Australian friends, the Symes and others joining with new acquaintances in these offerings. These will fade, but the sympathy of George Mascord's many friends in the craft, attested by the presence at the funeral service of no small number—that, unlike the flowers, will not wither or pass.

F. Colebrook.

L.S.C. Elections

Keenly contested elections for office in the London Society of Compositors resulted as follows:—Executive Committee: Case Department, Messrs. H. F. Wagdin, A. Lucas, C. A. Blackwell, W. F. Edgerton, W. Harrison, A. Littlejohn, G. Swaffield, C. Dee and E. W. Franklin; Reading Department, L. J. Mooney; Linotype Department, J. O. Hatcher; Monotype Department, C. Hart. London Trades Council: Messrs. A. P. Payne, C. Wood, H. R. Holmes, A. M. Wall, S. Fox, W. F. France, A. Allen, W. A. Davies, G. Lane and G. Wales. London Printing Trades Federation: Messrs. H. J. Willis, H. A. Cannon, J. Jackson, C. A. Bennett, and C. H. Shock. National Printing Trades Federation: Messrs. R. W. Couchman, C. G. West, R. H. Lucas, and H. Deuvall. Trades Union Congress: Messrs. T. Timberlake and F. Lemaire. General Federation of Trade Unions: Mr. A. Petrie. Joint Industrial Council (London Committee): Messrs. A. V. Coombs and A. Fox. The ballot for five seats on the News Committee resulted in the election of Messrs. J. Syred, F. J. Mayer, G. A. Buttery, W. A. Rodford, and F. Lemaire.

The "Douglagraph" Process of Reproduction

Introductory Note By F. T. CORKETT, F.R.P.S.

G. Douglas, M.B.E., F.R.P.S., the Superintendent of the Photo-process Office of the Survey of Egypt, sometime since invented and introduced to the Survey (early in 1918) to meet a demand for a quick and reliable method, a process which has proved most successful and is now in daily use and productive of over 2,000 printing plates annually. A description of this process was issued in a pamphlet Mr. Douglas published in 1920, but the present article deals more fully with the subject and contains the latest formulæ. I think this information will be very interesting to many operators and lithographers who do not know the method, and while, of course, it is to some extent a variation of certain well-known procedures, there is much real novelty about it, and at any rate will be new to most operators. It is certainly a most practical and satisfactory procedure. In giving this information Mr. Douglas hopes it may be of some service to craftsmen in the trade. Following is Mr. Douglas's own account of the process:

FACSIMILE reproduction of maps, plans, typescript, or any drawing or document in black ink, on white translucent paper, may be made direct on a planographic printing plate without the aid of a camera by this very simple process. The printing plate is produced by carrying out the operations now briefly described below.

A grained aluminium or zinc plate is sensitised with a bichromated colloid and exposed to the light in contact with the original to be reproduced; the light penetrates the translucent portions of the drawing and insolubilises the sensitive coating, while the portion behind the opaque lines remains unaltered. A developer is applied which removes the soluble portions of the coating and produces a negative or stencil of the original, which shows as clear silver grey lines on a chestnut brown background. The plate is then covered with a special ink which adheres to the metal where the clear lines exist; the stencil is afterwards destroyed by water or weak acid, resulting in a facsimile ink image of the original, perfect in every detail.

The plate can now be printed from lithographically by using the antagonistic properties of grease and water. The clean parts of the plate are in a condition to retain water, and when kept damp will repel ink of a greasy nature; while the other parts of the plate, having an image in greasy ink, will repel water and absorb ink. In printing such a plate in the machine, damping rollers pass over the plate and moisten the water-bearing surface and inking rollers ink up the work; a sheet of paper is then impressed on the plate and receives the printing image. Any number of copies can be produced from the plate.

The best originals for this process are those in black ink on white or blue tracing paper or cloth; therefore, when originals are drawn specially for reproduction by this process, such mediums should certainly be used in preference to others. Any original, however, which is drawn or printed in a fairly opaque ink on white translucent paper may be reproduced successfully by this method. Although some originals may appear quite suitable by reflected light, the fact that they are to be reproduced by transmitted light should be considered, and the original judged accordingly.

Typescript when typed with a black ribbon on thin white paper of even texture may also be reproduced by this process. When typing copies for this purpose, a sheet of black carbon paper should be placed with its surface in contact with the back of the paper. A reinforced impression is thus obtained which facilitates its reproduction. A number of pages can be printed down on a single plate, making it possible to produce quickly and cheaply copies of reports, etc., in a permanent ink when the cost of setting the matter up in type and printing it would be prohibitive, while the results are better than those obtained by velocigraphing or similar methods.

Printed copies for reproduction by this process should also be on thin white paper of even texture, and the ink should be a dense black; dusting with fine bronze powder before the ink is dry will ensure opacity. Thick paper may be made more translucent by treatment with a mixture of one part of castor oil and five parts of alcohol.

When originals are in several pieces, as when new detail has to be added or corrections to be made, the additional work should be drawn on the same kind of paper and fitted to the original by cutting out an opening the exact size of the patch. There must be no overlap near the work, and erasures should be avoided, as they alter the thickness of the paper and give trouble in exposure.

Originals on paper yellowish in hue require long exposures.

In addition to black ink, the following colours when used in full strength can be successfully reproduced:

Waterproof Inks: Vermilion, brown, yellow, indigo.

Cake Water-colours (rubbed down to the consistency of ink): Indian red, scarlet vermilion, burnt sienna.

Suitable originals having been described, the details for producing a planographic printing plate from them by the "Douglagraph" process are now given.

A clean finely-grained aluminium or zinc plate is washed well and wiped with a clean sponge; it is then coated with a sensitising solution made up as follows:

Solution No. I.—Gum arabic (white), 600 grms.; water, 8 lits; liquid ammonia, 24 c.cs.

Solution No. II.—Ammonium bichromate (pure), 200 grms.; water, 1 lit.; liquid ammonia, 8 c.cs.

Take three parts of No. I. solution and add to it one part of No. II. The mixed solution works best when fresh, so only enough should be mixed for the day's requirements. This solution is filtered and flowed over the plate from one side; after draining, it is re-coated from the opposite side and again drained. The stand shown in Fig. 1 will be found a convenient method of coating the plate; the excess solution drains into a measure, and when filtered can be used again. The plate is now laid on two wooden bars fitted with projecting pieces, placed at a distance apart which is a little less than the width of the plate (see Fig. 2). This arrangement gives the plate a slight bend which

ensures an even coating. The plate thus fixed on the wooden bars is placed either on a hot plate or in a drying oven (see Figs. 3 and 4).

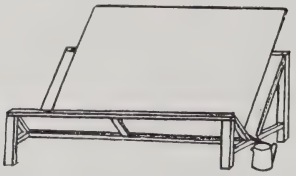


FIG. 1. COATING STAND FOR DOUGLAGRAPH PLATES.

The temperature should not exceed 50 degs. C., as too high a temperature tends to insolubilise the coating, thus making the development difficult.

A number of plates can be prepared at the same time for convenience of working, and if kept in the dark will remain in good condition until the following day.

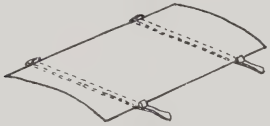


FIG. 2. SENSITISED PLANOGRAPHIC PLATE IN POSITION FOR DRYING.

The original to be reproduced is placed in a vacuum printing frame, such as illustrated, and the sensitised plate laid on it, the face of the original in contact with the sensitised surface. The frame is now closed and pressure obtained by exhausting the air. All these operations take place in a room illuminated by an orange-coloured light.

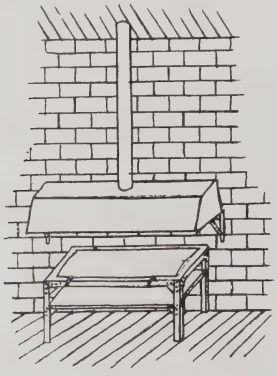


FIG. 3. HOT PLATE FOR DRYING DOUGLAGRAPH PLATES.

The frame is now exposed either to sunlight or to electric arc or mercury vapour lamps. The exposure will vary between wide limits according to the whiteness and translucency of the original as well as the intensity of the light.

Originals on tracing cloth in strong sunlight require about 1½ to 2 minutes exposure, while those on ordinary white drawing paper require about 12 minutes. The exposure required with an enclosed arc lamp of 15 amperes at about 30 cms. from the frame is from 3 to 4 minutes for originals on tracing cloth; when using mercury vapour lamps, about 6 minutes are required.

When exposure is completed, the plate is taken out of the frame in non-actinic light. The image should show distinctly before development as yellow lines on a chestnut-brown background.

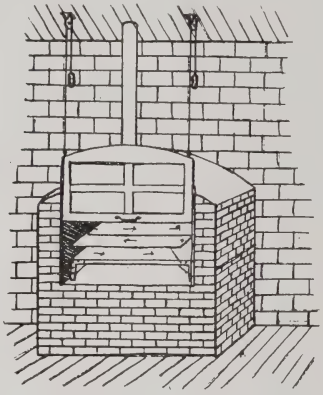
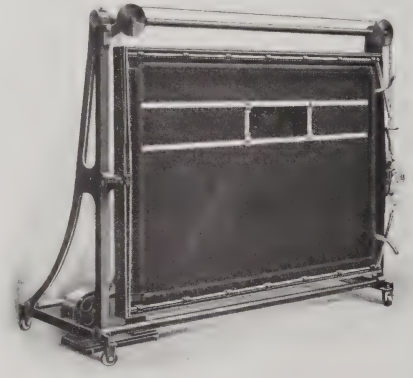


FIG. 4. OVEN FOR DRYING DOUGLAGRAPH PLATES.

A very small quantity of developer composed of glycerine (500 c.cs.) and sulphuric acid (25 c.cs.) is now poured on the plate and worked over with a sponge; in a few minutes the yellowness of the lines will disappear, and the image will show up clear and distinct as silvery grey lines on a chestnut-brown background.



VACUUM PRINTING FRAME.

It is most essential that the lines be developed quite clear, as otherwise the ink will be prevented from adhering to the metal; in other words, there will be a certain amount of colloidal matter between the ink and the metal, which in the after operations will wash away, taking the ink with it.

When the lines do not develop clear, a less concentrated developer will often be found effective. A useful strength is: Glycerine, 200 c.cs.; water, 100 c.cs.; sulphuric acid, 15 c.cs. When using this weakened developer, care should be taken that it is not kept too long on the plate, as it will destroy the stencil.

The plate is now cleaned with methylated spirit to get rid of the developer; this is best accomplished by pouring on the spirit in small quantities, and wiping off with clean white rags, repeating the operation three or four times, and finally rubbing the plate dry. It is now inked over with a special ink composed of: Asphaltum 15 per cent. solution in turps, 4 parts; photo transfer ink 15 per cent. solution in turps, 2 parts; shellac 10 per cent. solution in alcohol, 3 parts. The bottle is well shaken, and a small quantity of the ink poured on the plate and then quickly distributed by means of a piece of rag; it dries quickly, and is then placed in water or under the tap, and the stencil washed away.

This part of the process is usually assisted by rubbing with a sponge or a piece of cotton wool until the stencil has been completely removed. If difficulty is experienced at this stage, a sponge soaked in sulphuric acid (10 c.cs.) and water (1 litre), and wiped over the plate, will soon clear off the stencil.

The plate is washed well, dried off quickly, and wiped over with a weak solution of gum arabic, and dried. It is now passed on to the lithographer, who treats it in the ordinary manner of a planographic plate; it will then be ready for printing any number of copies.

The Printer and Advertising Art*

THIS book illustrates some, if not most, of the best work in black and white advertisement work in America in 1923, and records also the progress of artistic expression in the realm of publicity in colour also. The Editor of this journal has done an exceptional thing. He has placed the book for review in the hands of a man who knows nothing about the technical side of this beautiful work, but is the type of man for whom it is produced. After all there is point in that. Typographers and artists have their own point of view. They thoroughly enjoy expressing it in their work. But surely the ultimate test is its effect upon the people it is meant to influence. Pundits might argue for hours on this fount of type or that, on this combination of colour or that, on one particular form of layout or another—but in the end the question comes to be very simple: Which gets home best! The high priests of the printing trade will think this rank heresy. It is for them, they say, to educate the public taste. A very well known printer is reported to have said a few weeks ago he absolutely refused to take instructions with any order. Well, that will not do for some of us, and it certainly would spell bankruptcy in America, where there are hundreds of talented men kept busy by preparing instructions for the printer.

But I seem reluctant to get at this delightful book. I just wanted to justify the Editor—though some of us know he is his own justification.

The first thing to be said is that this is one of the most complete and interesting records yet published of the progress of the individual artists engaged in this class of work, and of advertising and public taste. Remember this work is all American. England can show more beautiful work, and personally, I think Germany is pre-eminent in design—but taken as a whole, remembering the ultimate purpose of the work, there is a skill and ability which can be found in no other country.

The painting in full colour, as used in magazines, in decorative design, in combining good drawing with effective lettering, should be a most valuable education. It records a progress of which all countries engaged in the printing craft and advertising business may well be proud.

In advertising, as in nature, it is the beautiful which lures the eye and which memory stores. If the reader would close his eyes and call up from the storehouse of memory the things in advertising art which lie there he would find they were mostly beautiful. It is that which arrested us, held us and permanently impressed us. Therefore it seems a fair conclusion that we in this country must be prepared to spend more money—not less—on the artistic side. The very best is only good enough. We have little to say in what we must pay to circulate the work—if it is for Punch, the Daily Mail, or for delivery by post. That charge is fixed. We do not cavil—we pay. But how much more important to be willing to spend more money if necessary on the message which costs us so much to broadcast.

Then, too, this volume clearly justifies the place of what may be called the typographical artist. The man who can bring real artistic feeling and true typographical taste to the work of wedding both into a beautiful and harmonious whole.

Many printers are naturally enough very touchy on this subject. They are really disappointed because they have allowed the development of advertising art to outstrip their own enterprise. They say hard things about the advertising agents who have captured this side of the work. But in America—I am sorry to keep making this comparison, but I am reviewing an American book, remember—it is often neither the work of the printer nor the agent—it is the distinct work of a man who, by diligent study, has qualified himself for this work. In New York alone there are many such. Personally, I only know the names of the Brothers Rosa. But their work illustrates what I mean. They are real artists—not in the sense that they paint pictures, but in the sense that they can design a beautiful piece of printing.

There must be men in London capable of doing similar work. My own impression is that we should be all the richer if we could find them and employ them. Merit of illustration alone, or excellence of typography alone, is not sufficient—it is the advertisement as a whole which counts.

Lastly, this volume is welcome as yet another proof of the wide field opened out by the combination of industry and art. The improvement in the design of ordinary commodities calls for progress in the art of making them known. A new spirit is abroad—the wise printers will trim their barques, raise their sails, and then place themselves to catch the blowing breeze.

*Third Annual of Advertising Art, published by the Art Directors Club of New York, distributed by The Book Service Company, 15, East 40th St., New York. Price $7.50.

The Marzio Overlay Process

As a step forward the Marzio overlay process, which is now being used by many of the leading printers in this country, lends itself to the progressive stages of making ready in a manner entirely distinctive from any other method now upon the market. No chemicals are used in its production, the relief being obtained by the application of two powders on to the printing sheet. The method of procedure enables the machine manager to make ready his forme in the ordinary way, all blocks being underlaid to correct height, and the first preliminary tuning up to bring all low parts up to the required strength of impression. When this stage is reached the special ink used in its preparation may be run up, a full body of colour equal to half as much again as is required in ordinary good printing being used. The forme should then be thoroughly cleaned, a pull taken to ensure everything being quite level, and all plates giving their full printing face value. The forme should then be thoroughly inked by rolling it several times, the rollers being then lifted clear of the forme, which should be allowed to stand two or three minutes to allow the ink to settle itself. This slight resting is essential to the process, to ensure obtaining full value in relief. An impression should next be obtained on the special paper supplied, to form the basis of the overlay. This sheet should be laid flat upon a table, and a sufficient quantity of powder No. 1 poured over the whole surface requiring it. This should be gently pushed with the broad brush in each direction along and across the sheet, both ways, care being exercised that only the powder comes in contact with the surface desired to be brought into relief first. It is essential that this detail is strictly observed, as, should the fingers, or the brush, or any other material touch the printed surface before the powder, the overlay will not be a success. A little gentle forward pressure of the brush used in propelling the powder on its journey will help to affix itself to the inked surface upon which it builds up the relief. This operation accomplished, all surplus powder should be shaken off, and also removed from any part where relief is not desired.

The sheet should then be placed flat on the table and a sufficient quantity of powder No. 2 should be poured over one end of the sheet, and gently propelled over with the broad brush along and across the sheet in both directions. The brush should be held upright for this operation, and every part of the printed surface where relief is desired covered. This operation slightly changes the colour of the overlay and also cleans out the lighter tones. All surplus powder should now be removed from the sheet, and the overlay is then ready to be placed in position. At this stage the process lends itself to such treatment as will enable the operator to bring into being those delightful touches of individuality that are dear to the artistic craftsman. With one of the finer brushes the powder may be entirely removed from any part of the overlay where extra lightness is desirable. Delicate clouds, fleecy and floating can be produced, intense lights of interior views can be enhanced, the horizon or the landscape can be given correct distance, and waves in seascapes be given that pleasing foam-crested roll so often desired. In portraiture delicate contours and facial expression can be rounded off or lightened in a most artistic and distinctive manner. This accomplished, the overlays in one sheet may be placed in position, and over them an adhesion sheet may be placed. This sheet is first to be sponged with fixing compound No. 3, which should be evenly distributed, and all surplus compound removed with a rag from both sides before being placed in position over the sheet containing the overlays. An impression may then be pulled, and all superfluous items showing now removed. A second adhesive sheet correctly prepared may then be put up. Several impressions may now be pulled to settle the overlays firmly, and a final tuning up of the whole forme given where required. Materials for the Marzio overlay process are supplied by Messrs. A. W. Penrose & Co., Ltd., 109, Farringdon Road, London, E.C.1.

Exhibition of British Printing

Arising out of the recent exhibition of printing done on the Continent which was held at the London School of Printing at Christmas, the Principal, Mr. Riddell, is arranging an exhibition of British printing at the School at Easter for the purpose of showing that printing, at least equal to that done on the Continent, is produced in this country. This will provide a good opportunity for comparison between home and foreign productions.

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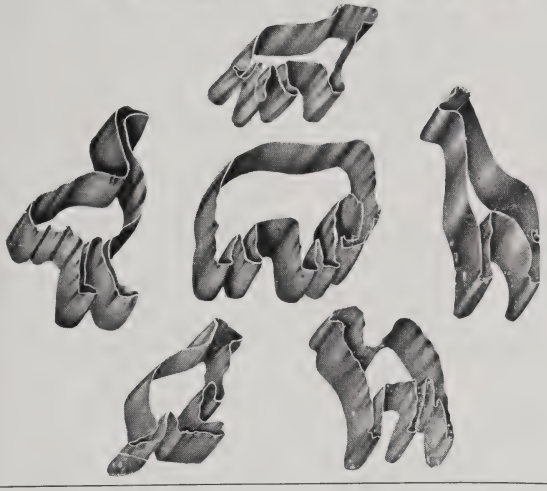

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Printing in South Africa

General Survey

THE Union of South Africa is a self-governing Dominion of the British Empire, embracing the four provinces of the Cape of Good Hope, Orange Free State, Natal and Transvaal. The population in 1923 was estimated to be 7,175,579 persons, comprising 1,579,733 persons of European descent, 4,872,923 natives, 169,291 Asiatics, and 553,632 of mixed coloured races.

South West Africa Protectorate (former German S.W. Africa) has a total population of 227,739 persons, comprising 19,432 Europeans, 177,462 natives, and 30,834 mixed non-Europeans.

Rhodesia is a self-governing colony of the British Empire, with a total population of 1,882,726 persons, comprising 37,254 Europeans, 1,842,023 natives, 1,306 Asiatics, and 2,143 mixed non-Europeans.

Two official languages are in use in the Union, English and Dutch (or Afrikaanse, which is a local form of Dutch). Both languages are taught in the schools, and practically all official literature is printed in both languages. The daily newspapers are largely printed in English, there being sixteen printed in this language and two in Afrikaanse. The weekly, semi-weekly, and thrice-weekly newspapers are about equally divided between the two languages. The reading public is almost entirely confined to the European races, as the civilisation of the native races is only in its infancy. In South-West Africa the European population is very nearly equally divided between English and German. In Rhodesia English is the only language spoken to any extent by the European population.

The monetary system is the same as in Great Britain, the pound sterling being equivalent to 4.86-2/3 dollars. The rate of exchange is now (November, 1924) 4.60 dollars.

Standard weights and measures have been established by Act No. 32 of 1922, which embodies the optional use of either metric or Imperial standards. One pound (avoir.) equals 0.4,535,924 kilograms, 1 kilogram equals 2.2,046,225 pounds, 100 pounds equals 1 hundredweight or cental, 2,000 pounds equals 1 ton.

EXTENT OF THE PRINTING INDUSTRY.

According to the 1922-23 Industrial Census, the Union of South Africa had 284 printing plants, for general printing, newspapers, lithographing and bookbinding, with 6,510 workers, of whom 4,474, or 69 per cent., were Europeans. There are also about 40 other printing offices in which less than three persons are regularly employed, and not rated as factories.

The number of printing presses in use in the Union in 1924 is as follows:—

Rotary presses on newspaper production	30
Rotary presses on jobbing work... ...	16
Flatbed letterpress cylinder machines ...	446
Flatbed and rotary lithographic machines	52
Platen presses or croppers	940
Total printing presses ...	1484

In addition to the above there are in the Union:—

Typesetting machines	317
Ruling machines	149

The value of production as returned by the Industrial Census for the year 1922-23 was as follows:—

General printing, lithographing, and bookbinding	£1,886,000
Newspaper production	1,612,000
Cardboard boxes and paper bags	206,000
Miscellaneous	36,000
Total ...	£3,740,000

LEGISLATION.

The freedom of the press in South Africa is a constitutional right, and any person residing within the Union may publish his writings. The necessary remedies for the abuse of this privilege are provided in the law of libel. A censorship does not exist. No special qualifications are required for establishing a printing office or editing a newspaper, but trading licenses are required for the various provinces, and the provisions of the Factory Act must be observed.

Printing establishments are not restricted to the towns, but may be set up anywhere. The only law requiring the printer's name on printed matter is that of the Cape Colony of 1859, and this covers only newspapers, pamphlets and work of a similar nature. The Federation of Master Printers is urging the Government to pass legislation requiring the printer's imprint on all printed matter produced in or entering the Union.

Copyright. By Act No. 9, of 1916, the British Copyright Act of 1911 has been given effect in the Union subject to certain modifications. The Governor-General may by proclamation direct the extension of the Act to literary, musical, dramatic and artistic works first published or produced in any part of the British Dominions to which the British Act does not extend in like manner, as if such works had first been published or produced in the Union. Copyrights are registered.

Other legislation affecting the printing industry in the Union is embodied in the following Acts, which will be briefly summarised under the section on Labour Questions:—

Workmen's Compensation Act. No. 25 of 1914.
Factories Act. No. 28 of 1918.
Wages Act (Women and Juveniles). No. 29 of 1918.
Apprenticeship Act. No. 26 of 1922.
Industrial Conciliation Act. No. 11 of 1924.

ORGANISATIONS.

(*a*) *General Survey.*

The newspaper proprietors of South Africa have been banded together since the year 1882 for the purpose of holding an annual conference, under the name of the Newspaper Press Union of South Africa (1). In 1916 a conference was held for the purpose of discussing matters relating particularly to the jobbing section of the industry, and it was decided to form an independent organisation termed the Federation of Master Printers of South Africa (2).

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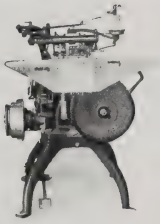

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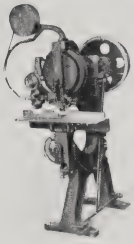

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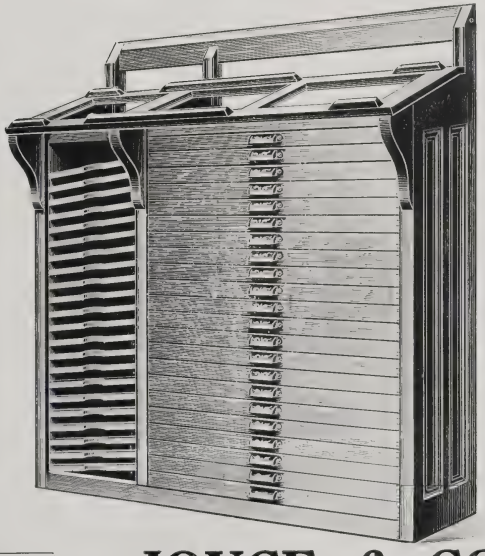

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These two bodies appointed representatives in 1919 to hold a joint conference with representatives of the workers' trade union, and the result of this conference was the formation of the National Industrial Council of the Printing and Newspaper Industry of South Africa (3).

The membership of the Federation of Master Printers comprises local associations of Master Printers, and in each centre where an association is in existence there has been set up a Joint Board comprising representatives of the employers and employes. The names of the various associations are as follows:—

Cape Chamber of Printing (4), Natal Chamber of Printing (5), Port Elizabeth Master Printers' Association (6), Associated Master Printers of the Transvaal (7), Border Master Printers' Association (8), Maritzburg Master Printers' Association (9), Bloemfontein Associated Master Printers (10), Associated Master Printers of Griqualand West (11).

The works managers and overseers of Capetown have formed The Cape Town Association of Printing House Craftsmen (12).

The workers have only one trade union, which embraces the factory employes in all branches of the trade, and extends to Rhodesia and Portuguese East Africa, The South African Typographical Union (13).

LABOUR QUESTIONS.

In the Union of South Africa the Workmen's Compensation Act, No. 25 of 1914, provides for the liability of employers to pay compensation to workmen or their dependents in case of injury or death by accident arising out of and in the course of their work. Written notice of the accident causing incapacity or death must be given to the employer as soon as reasonably possible or within six months in the case of incapacity or twelve months in the case of death.

An employer who receives notice, or is in any way informed that there has been an accident causing personal injury to one of his workmen, may require the workman to submit to an examination by a medical practitioner named by the employer. The employer and the injured workman may make their own terms regarding the amount of compensation, but if this is not done within two weeks after the notice of the accident has been served the matter may be referred to a magistrate of the district in which the accident occurred.

If terms are made outside of court either party may make application to the magistrate within six months after the date of the agreement to cancel the agreement or make such further order as the magistrate may think fit, provided it is proved that the sum paid or to be paid is inadequate or excessive, that fraud has been perpetrated or that the agreement was entered into in ignorance of the nature of the injury. Contracts relinquishing the workman's rights to compensation are illegal. Private insurance companies are prepared to insure employers against loss arising out of their liabilities under this Act.

The Factories Act, No. 28 of 1918, provides for the registration of all factories. A factory is defined as a workshop where three or more workers are employed in the manufacture or production of certain articles, or where power-driven machinery is used for the purpose of gain. Records of employes must be kept subject to inspection. *The legal working week* for persons over 16 years of age is 50 hours, or 9½ hours a day, or 5 hours continuously; for persons under 16 years of age, 45 hours a week, 8 hours a day, or 4½ hours continuously (5 hours on the half-holiday). *Women* may not be employed between 6 o'clock p.m. and 7 a.m., or boys under 16 years of age between 6 p.m. and 6 a.m. *Overtime* may be worked, but for women and for boys under 16 this is limited to three hours a day on three consecutive days of the week. Women over 16 years of age may work overtime on a maximum of 60 days in the year, and boys and girls under 16 a maximum of 20 days in the year. Overtime in these cases not allowed on holidays or half-holidays. Women may not work in factories during four weeks preceding or eight weeks following confinement (Government grant of £1 per week in needy cases). *Children* under 12 years of age may not be employed; over 12 and under 14 may be employed by special authority of the inspector. Children under 16 may not be employed in certain specified trades (type composing being one), and must in all cases have a medical certificate of fitness. *Holidays*: Sundays and statutory public holidays are specified. Other usual holidays may be substituted. Boys under 16 and women may not work on Saturday afternoons, except when a half-holiday is provided for on some other day of the working week. *Working conditions*: Provision is made for proper sanitation, ventilation, lighting, drinking water, fire escapes, etc.

The Regulation of Wages, Apprentices, and Improvers Act, No. 29 of 1918, provides for the establishment of local Wages Boards for the regulation of minimum wages for women and for all persons under the age of 18 years of age. The composition of such Boards is an equal number of employers and employes in the industry concerned, with an independent chairman and a secretary who is an officer in the public service. Wages Boards for the printing industry have been established at Cape Town, Johannesburg, and Kimberley. The address of the respective Boards is in care of the Inspector of Labour at the various centres.

The Apprenticeship Act, No. 26 of 1922, provides for the establishment of Apprenticeship Committees for various industries, to advise the Minister of Labour on matters relating to (*a*) the trades in which all minors shall be required to be indentured if employed longer than six months; (*b*) the educational standard for apprentices; (*c*) the duration of apprenticeship; (*d*) wages of apprentices; (*e*) cancellation or transfer of apprenticeships; (*f*) methods of training apprentices; (*g*) plant and equipment necessary for training; and (*h*) registration of contracts.

The Printing Apprenticeship Committee is a national body comprised of five employers and five employes in the industry, with an independent chairman and a secretary in the public service.

The following trades have been designated as falling within the Act:—Composing (hand or machine), Stereotyping and Electrotyping, Machine-minding, Bookbinding, Ruling, Lithography, Process Engraving, Printers' Artist, Engraving and Diesinking, Printers' Engineer, Proof Reading, Cutting, Rubber Stamp Making, Cardboard Box Making, Paper Bag Making, Envelope Making, and Typecasting.

No minor may be employed at any of the above trades for longer than six months without indenture, which must be registered, and persons may be indentured up to the age of 26 years. The seventh standard of education must be passed before indenture. The committee may use its

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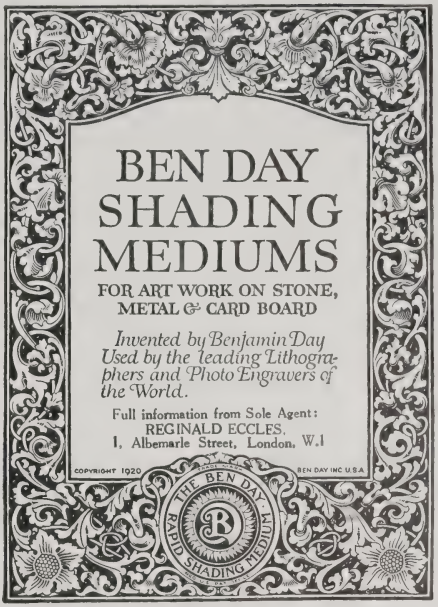
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discretion as to the number of apprentices which may be employed in any office. The period of indenture is ordinarily seven years, but allowance may be made for higher educational and technical qualifications of the apprentice. The wages of apprentices range from one-sixth of the journeyman's wage in the first year to 57½ per cent. of the journeyman's wage in the seventh year.

Further particulars may be obtained from the Secretary, National Printing Apprenticeship Committee, P.O. Box 37, Cape Town.

Against unemployment there is no State insurance, but the National Industrial Council of the Printing and Newspaper Industry has established a Joint Unemployment Fund, which is contributed to by employers and employes alike. Journeymen contribute 6d. per week, printers' assistants and apprentices 3d. per week, and the employers an equal amount. Benefits are £2 10s. per week for journeymen, but not more than one-half of full wage, and £1 5s. per week for others, but not more than two-thirds of full wage. Benefits may not be drawn for more than seven weeks in any one half-year. The S.A. Typographical Union has its own out-of-work fund, but allowances from the two funds may only be drawn in equal amounts, the total of which do not exceed one-half or two-thirds of the full wage, according to the grade of the employe.

In other respects wages, hours, and other conditions of labour are regulated by the agreement of the National Industrial Council. There shall be no strikes or lock-outs during the life of the agreement, which comes up for ratification every two years. Employers undertake to engage only members of the trade union, but foremen may please themselves regarding membership in the trade union. Piecework is abolished. The importation of labour from abroad is regulated. The ordinary working week is 46 hours for day work and 40 hours for night work, but for machine composing 43 hours day work and 40 hours night work.

The wages for journeymen in Cape Town are £6 2s. 6d. per week. Three higher grades have been established within the Union, ranging up to £7 12s. 6d. in Johannesburg and Pretoria. In Rhodesia the wages are £1 per week higher than Johannesburg. Certain country districts are graded lower than Cape Town.

The workers are allowed fifteen holidays a year on full pay, three of which are specified in the agreement.

Overtime is paid at the rate of time and one-third for the first six hours in any one working week, time and one-half for the next four hours, and thereafter double time. Double time is paid for work on the house half-holiday, Sundays, and the three specified holidays.

Typesetting machine operators are paid 10 per cent. more than ordinary journeymen. Operator-mechanics receive an extra 10 per cent. for keeping their machine in running order. Foremen must be paid at least 10 per cent. above the journeyman's scale.

The Industrial Conciliation Act, No. 11 of 1924, provides for the registration of agreements entered into by Industrial Councils and the extension and enforcement of such agreements throughout the industry concerned.

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SUPPLY HOUSES.

All of the requirements of the printing industry in South Africa are imported. Supply houses are established in all of the large centres, and these act as agents for British, American, and German manufacturers of printing machinery, type-founders, etc.

Printing machinery from the British Dominions enters the Union free of duty, but a rate of 3 per cent. *ad valorem* is charged on imports from other countries. The same applies to paper, ink, and bookbinders' requisites.

There has been a tendency in the past for supply houses to sell direct to the customers of the printers, and this has led many of the larger firms of printers to indent abroad for their paper requirements. Conferences have been held between the Federation of Master Printers and the supply houses, and there is a tendency toward better co-operation. An agreement has been come to in regard to curtailing the reckless fitting up of printing shops with an insufficient financial basis.

CUSTOMERS.

Standard conditions for the printing trade have been adopted by the Federation of Master Printers. These cover the conditions adopted in Great Britain regarding experimental orders, proofs, customers' property, delivery, expedited delivery, quantity delivered, claims, standing matter, acceptance of estimates, contracts, and force majeure.

The regulation of prices is not within the scope of the Federation of Master Printers. The local associations have at various times issued to their members schedules of average hourly cost rates as guides to estimating, and in some towns there have existed lists of prices to be charged for small work only in order to save estimating. The Federation promotes the use of a standard system of cost accountancy based upon that adopted by the Master Printers of Great Britain.

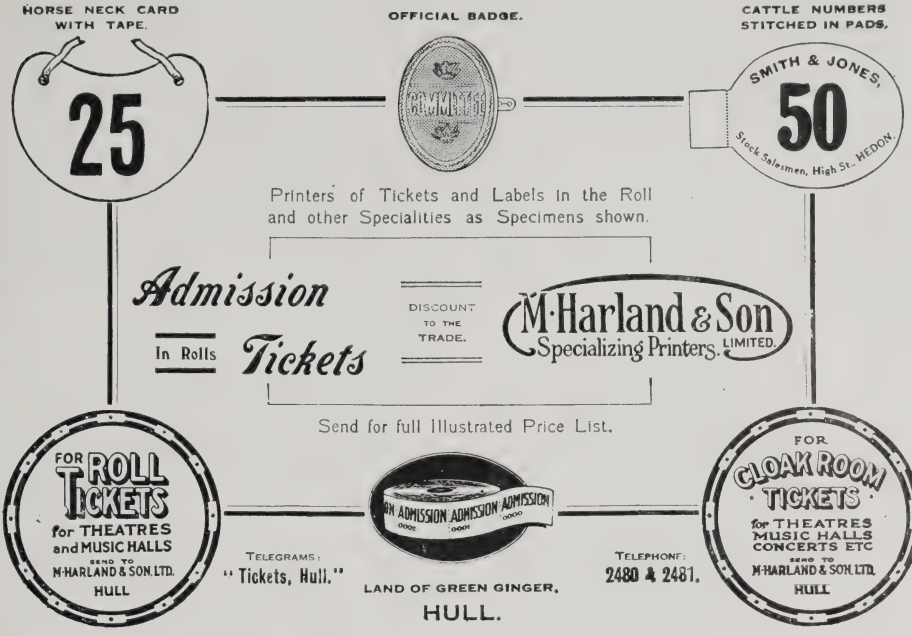
The sale of printed matter by agents, *e.g.*, stationers with commission, is only carried out on a small scale.

Owing to trade depression and considerable overseas competition, the prices for printing have been steadily declining for the past three years, until many printing firms are faced with a very serious problem.

Books enter the Union free of custom duty. Printed, lithographed and embossed matter, account books, catalogues of Union firms, and general advertising matter is subject to a custom duty of 25 per cent. *ad valorem*, or in some cases 3d. per pound weight, whichever is the greater. A rebate of 3 per cent. is allowed on imports from Great Britain and the British Dominions. The Federation of Master Printers has made representations to the Government to have the duty increased.

STATE PRINTING.

The Government Printing Works at Pretoria is the second largest printing establishment in South Africa, employing about 300 workers. A new building is under construction, to cost £100,000. About 75 per cent. of the printing required by the Government is done in these works, the remainder being given out on private tender. Much of the parliamentary work is done in Cape Town, which is the parliamentary capital of the Union.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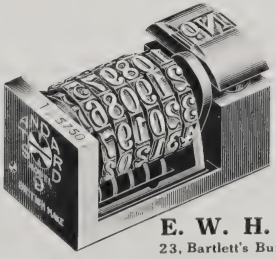

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How I Built up My Business

OUR readers will be interested and amused at a story told in the March number of Spicers' "Notes for Buyers." These notes mostly have something piquant and useful, and the account with the title of the above heading is in response to a prize of £5 offered to members of the trade.

Mr. Titmarsh, head of the Eagle Printing Works (Linton), Ltd., well deserves the prize, we should think, not only for the story, but his way of telling it. Eighteen years of age, with an experience of two years as a railway porter, and a few months behind a newsagent and stationer's shop, this youngster launched himself out as a master printer. Here is his tale:—

"'I should think a printing business would pay in Linton,' said the owner of a small local weekly, who incidentally had called to collect his account; 'I have a plant for sale that would just suit you.'

'And how much do you want for it?' I inquired. As my worldly possessions in actual cash did not exceed £10, I further asked the period of credit I might expect. After a few brief explanations a bargain was finally struck at the round figure of £50, plus carriage and re-erection, whatever that might mean.

I had never seen a printing plant in my life, and I had not the faintest idea what would happen 'on re-erection.' Certainly I had heard that type was always set 'backwards,' but those were days when obstacles did not act as a brake on the wheels of ambition.

I ought to here describe the future home of the new plant. As previously stated, the building was only a tiny newsagent's shop, two rooms on the ground floor and three small rooms upstairs. The height of either upstair or downstair room did not exceed 6ft. 6in. Each upper room was lighted by a tiny window the size of a demy sheet of paper. The premises had previously been occupied by a spinster lady whose fondness for cats and collections of old newspapers had created an accumulation of unearned increment to a considerable extent.

A few days before Easter in 1906 the 'plant' arrived on an engineer's lorry from a small industrial town, eight miles away. I shall never forget the sight as long as I am permitted to live. As I surveyed the motley collection as it was laid piece by piece (with what I considered unnecessary care) on the pavement outside the shop, I thought if I was not quite mad when I bought it I soon should be.

The bedrooms received a hurried clean and the precious plant, consisting of

An old plough cutting press,
A Demy Columbian Hand Press, and
A Demy-folio Albion Hand Press,

and about twenty cases, broken and mixed, of small founts of type and various oddments, were carried upstairs. The winding staircase was not more than three feet wide, and promptly gave way when the heaviest part of the demy press was halfway up. Luckily the 'man' was on the upper side when the collapse came, otherwise this account might never have been written. Up those precious stairs the plant was finally carried, and then came re-erection.

The only local man available was more of an undertaker than an engineer, so I finally got a man from a firm whose chief business was *Repairs to Steam Ploughing Tackle*. The frames that would bear handling were put together in amateurish fashion, and the 'tackle' engineer started to build up the 'machinery.' Perhaps my readers will remember the impression bar of the old Columbian press carries a heavy cast eagle as a weight and a trade mark. When the press was erected the eagle was too tall for the ceiling. To get over the difficulty my engineering friend had a ball cast, weighing six stone and pierced to allow the bar to slide through. After several days' work the 'plant' was ready for business.

I had not the faintest idea what was going to be done, or even how to set a single letter in a stick. After consultation with the vendor I was recommended to take over the man who had previously worked the plant. As if inspired, I jumped to the suggestion. After a few days my first printing employe arrived. He was a man about forty who chewed tobacco and drank heavily. As, however, I had succeeded in collecting a few orders, I could not wait to choose my man, and I was terribly anxious to learn how the 'plant' worked. Actually my first experience of the trade was the printing on a demy-folio press of 100 billheads for a local tradesman. Needless to state, my man had put up the type and made ready the forme on the press. Things went well for a few days, then a dire calamity happened. My man took to drink and went on strike. Incidentally he whispered to me as he went out, 'Fancy printing in a bedroom with no light; you'll never learn the printing trade as long as you live.'

That settled it: I knew after that remark I should become a printer. There is nothing like telling a man he cannot do a job and then leaving him to it. What followed can be left to the imagination of those readers who are experienced printers. From early morning till late at night I practised setting up type, proofing the copy, washing up and 'dissing' the formes. An abject apology is tendered to those local tradesmen who had those first jobs thrust upon them. As I look back and tenderly glance over those prints, it seems providential that I ever got a repeat order. After two years I had become (in my own estimation) fairly proficient. I had married and had visions of being able to do the printing for the whole of England. My wife used to hand-ink the forme whilst occasionally the baby was held on the other arm. Let me confess that I have pulled off 10,000 butcher's meat tickets on a demy-folio handpress *one at a time*. It is wonderful what determination

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can do, and I had no intention of being beaten, although by the year 1909 the floor was sagging dangerously under the weight of the demy press upstairs.

By 1910 I had broadened out to a small corrugated iron roofed shed at the back of the premises. It was quite by accident when the floor was being laid a heavy blow disclosed an old well, 14 feet deep, the covering timbers of which had rotted away. This spot was the originally chosen site for the old demy. By 1912 I felt sufficiently confident to take *and train* two lads. My small country connection was gradually extending; upon what basis the work was priced out I had not the slightest idea. Unconsciously, however, I had grown to love the work, and many of my days stretched from 7 a.m. to 11 p.m.

There is in circulation now a work on Linton Church by a local antiquary. It contains 40 demy 8vo. pages. I turned this out myself with three half-cases of long primer type, and pulled off each copy on a demy folio handpress. It should be added that the book contains one halftone illustration which a neighbouring printer kindly run for me. Apart from this one page, the whole of that work passed through my own inexperienced fingers under the conditions I have stated. It is not a work of art, but if its readers (those who are printers, at any rate) knew the exacting conditions under which it was published, the result, I feel sure, would not be looked at too critically. This was the first job I remember attempting to price properly, and I expect it was because it took many months to complete that a time record was taken.

To attempt to tabulate war experiences of trade would be too new to be interesting, but I dare state it was not until the early war period that I bought my first platen. 'Why not?' I hear someone say. Well, country printers have to build up their business on low prices and long credits, and how I managed to survive my early financial difficulties will always, even to myself, remain an unexplained miracle.

The editor asks for a brief account of early training; my account will be brief—it was nil. Beyond being the possessor of a very ordinary intelligence and power of observation, I can faithfully record experiences that to myself are wonderful in retrospect. Perhaps when the editor runs a further competition I may be tempted to record a few experiences preceding and subsequent to the brief account penned here.

We are now a small limited company, and this week we are roofing in new works that will favourably compare with many town premises. In a few days' time a double-royal will be installed, and a new chapter commenced in our tiny history. We shall still keep that old Columbian eagle. The foreman will be a man I trained myself 11 years ago, and no reasonable letterpress printing order will be beyond our ability to complete. We are not yet out of our financial difficulties, but we do not intend to be beaten. The business has now grown into a living faith, and will be surrounded by that spirit of optimism that knows not defeat.

The business, tiny as it is, was built up by work, perseverance, determination, and again work."

The old-established firm of Robert Thornton, Paragon Wire Works, Cleckheaton, has, for family reasons, been formed into a private limited company, with Messrs. B. H. and Thomas Thornton as directors. We understand that the business still continues to grow, the firm's connection among printers being rapidly on the increase.

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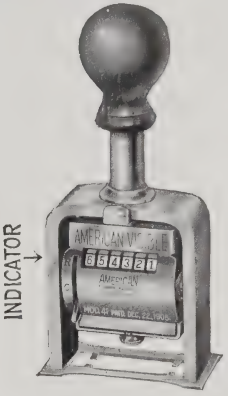

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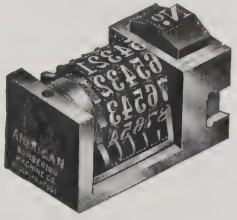

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What Does the "Price-Buyer" Buy?

A Reply by a "Price-Buyer"

YOUR article last month under the above heading does not carry the point quite far enough. Surely the "Price Buyer" has something to say should the printing, when delivered, not come up to the required standard that he was in the market for.

Many printers deliberately cut prices to get orders when they know the quotation is for a "Price Buyer," and then adopt various methods (I nearly wrote "dodges") to supply inferior printing (sometimes as regards workmanship, and more often than not as regards material).

The "Price Buyer" who is dealing on a large scale has the necessary protection against the printer who adopts such a practice, and generally has the necessary knowledge to detect bad work. What happens then? The printer in nine cases out of ten has the job returned to be done again, or, if time or other circumstances prevent this course being followed, a substantial reduction is made to his account, so he loses in either case.

I contend that the "Price Buyer" is not at fault by accepting the lowest price; it is the printer who offers a price below what is a reasonable one for making a good job of the work tendered for. Printers would gain by always following that very old adage, "If a thing is worth doing, it is worth doing well." This saying when closely followed by the printer is bound to pay, as every piece of print "tells a story," and the printer, having no idea as to how many people hear the story, does not realise how damaging a bad job can be—the better the job, the more far-reaching effects. How often when one sees a really well-turned-out job does the question arise, Who did this work? This surely is the advertisement for the printer.

Daily Herald Helped by Capitalists

IN Mr. George Lansbury's recently published story of the chequered life of the daily newspaper of the Labour movement there are some interesting references to the printing trade, and one or two lamentable faults of memory. The idea of establishing The Herald actually arose from the publication of a bulletin during a strike of printers in 1911, and Mr. Lansbury states that the masters were "led by Joseph Causton and The Daily News."

This was not a newspaper strike at all, and The Daily News took no sides in the dispute. In several passages Mr. Lansbury refers in terms of sweeping denunciation to the "anti-labour" and "capitalist" press, in which category he seems to place every paper except his own. But it would have been a graceful act to mention that on several occasions after the war, when the price of paper rose to almost prohibitive heights, The Herald would have had to suspend publication but for loans of paper by other London dailies, which treated The Herald in this matter in accordance with the fraternal traditions of Fleet Street.

From the day of the first daily issue until it became a weekly after the beginning of the war, and again after reverting to a daily in 1919, the staff plunged from one financial crisis into another. When one day's paper had been produced there was no money for the second, and there would have been an immediate crash if Sir F. Newnes and Messrs. Bowater had not agreed respectively to print it and provide paper on credit for a few days.

Mr. Lansbury pays a generous tribute to the help given by these firms, and he seems to have fully appreciated the irony of the circumstance that the subsequent unceasing assaults by The Herald on the citadels of capitalism were made possible by this help.

Caxton Convalescent Home

THE annual meeting of the Board of Management of the above Printing and Allied Trades Institution was held at St. Bride's Institute, E.C., on Saturday, March 14. Mr. C. J. Drummond, J.P., presided, supported by the treasurer, Mr. C. W. Bowerman, M.P., Messrs. W. F. France, J.P., C. E. Mason, J.P., and E. Briscoe (trustee).

The thirty-fourth annual report, presented by the Chairman, was of a very satisfactory character, both from a financial point of view and the number of patients admitted. Income reached £4,100, an increase of £486 on the previous year, due mainly to a large accession of penny-per-week subscribers. In addition, a legacy of £900 has been received and invested to form an endowment fund. The debt on the War Memorial Wing has been reduced by £800, and since the close of the year the balance (£200) has been cleared off. The Committee are making an effort to raise a fund to complete the building by adding the west wing according to the original plans. For this purpose £560 has been already subscribed, and further donations will be welcomed.

The adoption of the report was seconded by Mr. C. W. Bowerman, M.P., and after comments of a gratifying character from several members agreed to.

Mr. C. J. Drummond, J.P., was again elected president, Mr. C. W. Bowerman, M.P., treasurer, and Mr. S. J. White, secretary. Vacancies on the Committee were filled by the appointment of Messrs. W. H. Greatwood (Art Reproduction Co.), A. Low (Hudson & Kearns), W. Tigg (Printing Department, Bank), and E. R. Tomkins (Wyman & Sons).

An interesting discussion on the convalescent work of the Home, the need for the further extension of the building, the growing popularity of the institution with provincial printers, and the best way to make its advantages better known in the printing trades, took place.

The Lightning Proof Press

Many years ago, when Messrs. Soldan & Co. first introduced this self-inking proof press on this market, it created a revolution in the construction of proofing presses. Since then many improvements have been made from time to time, and to-day Messsr. Soldans, Ltd., claim it to be still the leading press for obtaining perfect proofs equal to machine proofs from tied-up matter, formes or galleys. The bed is adjustable, and enables the impression to be regulated by the thickness of a sheet of tissue. Full particulars of the latest models can be had from Messrs. Soldans, Ltd., 44-46, Eagle Street, Holborn, W.C.1.

Nickel Facing

It is well known that nickel facing of a stereo prolongs its life almost indefinitely; it is now possible to get a run of about 750,000 copies from a nickel-faced stereo, and printers who have not seen the plant for producing these will be interested in the exhibit of Messrs. W. Canning & Co., Ltd., Great Hampton Street, Birmingham, at the Printing Exhibition. This firm, among other exhibits, will be showing a complete working nickel facing plant, and all visitors are invited to take small unbacked stereos to Stand No. 3, Row H, where Messrs. Canning will be pleased to nickel face them and demonstrate this simple process.

Off to Australia

Many of our readers will be interested to hear that Mr. T. W. Brown has been appointed illustration manager to The Melbourne Argus and The Australian, and has already sailed to take up his new appointment. Mr. Brown was one of the pioneers in the photo-litho offset side of our business, and played a great part in the development of the process with the Robertson Company at Blackpool. He afterwards came to London and had charge of this department for Messrs. Odhams, Ltd. He is also one of the patentees of the Robertson photo-typesetting machine. We have great admiration for Mr. Brown's achievements, and think it rather a pity that a man of such distinct gifts should not have been retained in this country; but our loss is Australia's gain, and we wish for him every happiness and prosperity in his new venture.

Obituary

We regret to announce the death on Monday, Marsh 2, of Mr. James Mackay, after a serious operation. Mr. Mackay was one of the two original partners in the firm of W. & J. Mackay & Co., Ltd., of Chatham. He was born in Edinburgh in 1854, and gained his knowledge of the printing trade in Leith with his elder brother. This business passed to a younger brother, and Mr. James Mackay came south to Chatham in 1878 with his elder brother, having purchased The Observer. He was active in the formation of the Chatham and District Master Printers' Association, and was the first president in 1911.

The Royal Edition of the Times

It may not be generally known that after a Royal visit some time ago to Printing House Square a special Royal edition of The Times is now run off the machines after the ordinary edition. The "Royal" is printed on special paper, good for preservation for a century. It is sold at fourpence a copy to libraries and those who wish to file copies.

BOOKLETS Collective Advertising

The SPECIALIZED EDITORIAL AGENCY

is prepared to write and illustrate with original drawings Booklets which printers may be asked to undertake in connection with the new advertising campaign.

¶ This Agency has a Staff of competent writers and artists capable of dealing with this class of work.

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The Caxton Magazine

ESTABLISHED 1899

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¶ ADVERTISING RATES upon application.
¶ Alterations in current Advertisements must reach this Office not later than the 16th of each month, failing which the Advertisement wil appear in the same form as in the last issue.

PREPAID TARIFF FOR SMALL ADVERTISEMENTS

Small Advertisements, together with remittance, should reach the Publishing Office not later than the 21st of each month.

BUSINESSES FOR DISPOSAL AND WANTED; PARTNERSHIPS; PREMISES TO LET, ETC.; SALES BY AUCTION OR TENDER; SALE, EXCHANGE & MISCELLANEOUS COLUMN, EMPLOYERS WANTING ASSISTANTS; APPRENTICESHIP; TRAVELLERS; ETC. } 1d. per word. Minimum 3/-.

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GOUDY HANDTOOLED

10 Point
MEN GRADUATE
Students from many
states complete their

12 Point
INDEPENDENT
Remote little isles
given opportunity

14 Point
BURLESQUE
European light
opera with fine

18 Point
THE ATF!
Shortt & Co
supply this.

24 Point
HOCKEY
Ice skating

30 Point
RECIPE
Nymphs

36 Point
Ensure

42 Point
Herds

72 Point
Dial

60 Point
Sight

48 Point
Epoch

GOUDY HANDTOOLED ITALIC

72 Point
Bird

60 Point
Eight

48 Point
Judges

24 Point
GNOMES
Responded

30 Point
FROND
Naughty

36 Point
Norton

42 Point
Spirits

10 Point
HUNTING HORSE
Southern equestrians
display unusual skill

12 Point
SUBSCRIPTION
Notable magazine
increasing number

14 Point
MODERNIZE
Improved ways
of manufacture

18 Point
THE ATF!
Shortt & Co
supply this.

Sole Agents for The American Type Founders Company
C. W. SHORTT & CO. LTD,
8 FULWOOD PLACE, HIGH HOLBORN, LONDON, W.C.1.

A.T.F. 24-pt Rosa Border No. 10.

Please say you saw the Advertisement in THE CAXTON MAGAZINE.

THE CAXTON MAGAZINE
A PROGRESSIVE ORGAN OF THE GRAPHIC ARTS
Edited by A. E. OWEN-JONES

Craftsmanship and the Printer*

By GEORGE W. JONES

TO printers, craftsmanship is the greatest of the things that matter. For good or ill, for its advancement, for the maintenance of its prestige among art crafts, for its honourable condition, and for its best service to the human race, we printers have entered upon a service to which our lives must be devoted. A great legacy has come down to us, and that we may pass it on in its completeness I am pleading for a higher expression of craftsmanship in our work, for our own sake, for our city's sake, for our country's sake, and for the sake of the craft itself.

I welcome the opportunity of speaking on technical excellence which this meeting of Sheffield printers presents, especially because you are citizens of a city which has for centuries been famous for the quality of the craftsmanship of its principal industries; master craftsmanship which has made it the envy of its competitors; and also because its workers have thus helped so largely to make the reputation of the Englishman abroad for perfect workmanship, as well as honest dealing, one which the whole nation values and cherishes. Each one of you shares in this honourable tradition which is one of the proud possessions of your city. Even so, we printers share in the rich traditions which have been handed down to us. As we seek, in the fulfilment of our daily task, to be worthy of such participation, we bear relationship, according to our work worthiness, to the great printers who have always been found prepared to maintain the prestige of our so honourable craft.

"Let us now praise famous men, and our fathers who begat us" as printers; but let us not only praise them, but let us seek to follow in their footsteps, and try to be worthy of our craft relationship.

THE EARLY FATHERS.

I desire to make reference to several of the early fathers of our craft, and to their work, because I want you to become deeply interested in them and in their achievements, as well as to seek to understand some of the difficulties they encountered in its doing. Their names and the glory of their accomplishments can never perish, thanks to the preservative nature of the printer's calling. I want them and the rich inheritance they have left to their successors to be familiar things to you, and not merely or largely the knowledge of the scholar and the bibliophile.

The printer critic is largely the admirer of the work of our great masters according to his individual tastes and æsthetic leanings. He is often the prejudiced critic of our fathers' work, and he thus appraises its excellence and value according to his personal predilections. It is a matter of æsthetics with such authorities.

We are the successors of the printers of the immediate as well as the remote past, whatever may have been the characters in which they wrought, and the style of typography they made their own. To us these things belong, according to the measure of our ability to understand, from our particular vantage ground of a familiar and practical knowledge, how they came to be, and are able to appreciate the painful toil of our predecessors, as well as the greatness of their triumphs over difficulties.

We are equally proud of them and the heritage they have left us, whether, in their typographic work, their national taste and environment led them to the use of the gothic, or the roman character with its widely differing form, the black-letter character of which the 42-line Bible is a great exemplar; the perfect gothic types of that great printer Peter Schoeffer, sometime colleague of Gutenberg; the virile types of Gunther Zainer, which so influenced William Morris, and other printers of the Augsburg School; the exquisitely-cut gothics of Ulrich Zell, whose beautiful books attest the perfection of his craftsmanship in type design, casting and printing, and other fifteenth century craftsmen working in the gothic character; or the beautiful roman types, of which that cut by Nicolas Jensen, the Frenchman, printing in Venice, will ever be acclaimed the great pattern, and to be the model on which scores of roman types were to be cut by men in striving to exhibit their conception of a perfect letter during even the fifteenth century; or whether they were the romans and italics used by Aldus and his successors which found graceful evolution in the best founts of Claude Garamond and Robert Granjon, and their contemporaries and successors, in the first half as well as the latter part of the sixteenth century.

* An Address to the Printers of Sheffield.

A DEFINITION OF CRAFTSMANSHIP.

The question is often asked, "What is craftsmanship?" A full and comprehensive answer is not easy, but it can be said that it must comprehend knowledge, skill, interest in and love of calling, and especially mastery of our job. Knowledge and skill, combined with love, must beget mastery. Craftsmanship, as seen in the perfect fulfilment of work, may be one of the highest expressions of human worship. It is often in the doing well of an uncongenial task. It is the expression in our work of love of our job, and it is not confined to the production of apparently beautiful things. It is often seen in the doing of some of the homeliest tasks. It is seen in the simple work done with a nice care and thoughtfulness by the young apprentice, equally with the perfected job upon which the most skilled workman in the office has been lavishing all his skill and knowledge. It is especially seen in the printer craftsman's reverent use and understanding of the greatest agent in the world's civilisation—the printing type.

Let me therefore plead with you as craftsmen for a careful and reverent use of this simple piece of metal: the thing that "looks but leaden and dumb."

"CAREFUL OF THE TYPE."

The types you handle every day of your life are the outcome of centuries of study and patient industry on the part of hundreds of artist craftsmen in the endeavour to make them perfect. We are sometimes careless in their use. Familiarity has robbed the type of some of the fascination it had for us when first we were allowed to use it in the making of words. Dumb it may be without your cunning and skill, but you can make it tremendously powerful for good or ill, as your predecessors have done, and as some of the world's tyrants have found to their cost during the past four hundred and seventy-five years. Even so you can make its presentation a beautiful thing by its enrichment of the message your task is often intended to convey.

Whatever the nature of the work in which you shall use it, the simple announcement, or the telling of some great truth, let your use of this simple, but in your hands powerful, agent in the world's civilisation, be such as befits its origin and destined service. It will serve you the more perfectly as you shall cherish it and care for its condition. Let me call to your remembrance old Barbour's admonition:—

> "Types to they that be of the craft are as things that be alive; he is an ill worker that handleth them not gently and with diligence."

THE FIRST THE BEST.

I fear that we too often, in the hurry of our busy business lives, forget all the labour that has gone to the creation and perfection of that simple agent on which the whole structure of our important craft is builded. The long, long years of thought, and toil, and hope deferred, and heartbreak that were experienced before our great master, Gutenberg, arrived at the making of the perfect type—a type so perfect that the well-known establishment in your midst, so famous for the excellence of its type casting, could not better it—which by reason of its design, its cutting and its casting, as seen in each of the pages of the wonderful 42-line Bible of about the year 1450, with its regularity, its perfect alignment, and perfect composition and printing, seems to justify the claim of William Morris and other lovers of our calling, men well qualified to express opinion, that the first book printed was the most beautiful book ever printed. Surely here was not only imagination and ingenuity, and patience, and wrestling with difficulty to be miraculously surmounted, but craftsmanship in excelsis. No greater craft master or authority of our time was better qualified to give opinion than Morris. In all the crafts he touched he showed himself without equal, and in his mastery of our particular calling, the result of an intimate knowledge and close study of the work of the greatest printers of the fifteenth century and of their successors, and by his personal experience, gained by a study, more intense and sympathetic, of the various means used in the production of the book than by any living printer, he became an authority not lightly to be disregarded. He was in no doubt on the matter. Some there would be who would give his Chaucer pride of place over the 42-line Bible.

THE UTMOST FOR THE HIGHEST.

It is to us printers a source of the greatest satisfaction as well as of pride that the Gutenberg Bible exhibits all through its two volumes the perfection of master craftsmanship. Well might its production be attributed to various agencies. Gutenberg's immediate successors, as well as the man to whom the Courts awarded his property in plant and Bible, and his assistant Schoeffer, strove right well, with their rude presses, to present the new craft with becoming care and perfectness. Loving regard is seen in all their work. They gave to the world and to us the best they could do. Their example should be an ever-present admonition as well as a perennial inspiration.

I like to think of those two German printers, Sweynheym and Pannartz, who probably as the result of the sack of Mainz, left the city with their rude means of production, crossed the Alps into Italy, and, finding a more roman character essential to meet Italian demands, cut a type which, though it retained much gothic influence, yet inclined to the roman; and, finding that even too gothic-like, cut yet again another fount, more nearly roman in character, a beautiful type, more fitted to meet

Italian needs. Truly there were giants in those days! Because those men were not dismayed by difficulties such as these, they were able to give to the world, by the aid of both founts, examples of printer craftsmanship which, four hundred and sixty years afterwards, are still acknowledged to be masterpieces of book production. By this close study of the accomplishments of the early printers, by learning the lessons that only they can teach, which alone can be derived from so pure a fount, it may well be that our young men, even in this twentieth century, may see visions, even as some of our old men dream dreams.

One could talk for a long time of the early masters of our ancient craft, of their contemporaries and successors, and of the technically perfect work they did, and of the inheritance they have left us. We should be grateful for the richness of the legacy of their work, and for the example they were to those who followed them in quick and later succession.

OUR RESPONSIBILITIES.

And we are their present-day successors! It is to us printers of to-day, and to us alone, that the world looks, to maintain the virtues of their workmanship, and our claim to craft relationship. We cannot get away, even if we would, from our responsibilities, or from the fact that we bear relation to these men, and they to us, because of this craft association.

Let me appeal to you to make that relationship close and intimate: close, by seeking possession of their spirit in a true love of calling, and intimate by taking every opportunity to study the scanty stories of these men's lives; and, whenever opportunity can be made, to study their work also. So shall our relationship grow closer, our daily service become a more delightful task, and our usefulness find greater expression.

Our craft of printing, by its unique attractiveness, has drawn to its service, right from its almost divine creation—it is a creation rather than an evolution, for as we know it it came to us perfect from the hands of our first printer—men of great human sympathies, men of art feeling, and of high literary attainment. From its birth right until now it has been exercising such fascination. These men who have come into the printers' craft have enriched it with noble service. The work of such to-day is characterised by the very highest technical skill in all the departments that contribute to make the perfect book. Another call to us whose lives are given professionally to its service to exhibit in the "daily round" the best that opportunity and means will afford, so that it may not become with us simply the "common task."

THE DEBT WE OWE.

Not all these great traditions of its earliest history, not all the wonderful expressions of the skilled craftsmanship of our first printers, preserved in public and private collections, can keep our craft in the honourable position in which it should be maintained. We must all, as printers, in our generation, in our sphere of influence, whether it be great or small, as far as our opportunities permit, seek to maintain in our personal work its great prestige, and hand on the craft to our successors, in all its worthiness and beauty, and fitness for service.

It is impossible to estimate the contribution of our craft to the sum of human advancement, industry and invention, human liberty, and human happiness; just as it is impossible to conceive the world of 1925 without the printing press. The wonderful heritage of the centuries, with its glorious record of accomplishment, is especially the possession and the birthright of every printer, young or old, according as he serves it to the fullest of his power and opportunity. If the craft of the printer is worthy of our best service, our earnest inquiry should be as to how we can most effectively equip ourselves for the expression of that service in our common work.

WHAT WE NEED.

Our perfect equipment for the task will come only by craft mastery and craft devotion! It will not be enough to study the story of our calling, and of its early masters. We must seek a knowledge akin to theirs, an understanding deep and intelligent of the character and power, and influence of the very means they used, that their successors used, and that we have to use in our work. This calls for diligent and continuous study, arriving, by our own deduction in part, at the reason for changing fashions, changes in presentation both of type form and size, for decoration and non-decoration, for changing styles, for decoration simple and more ornate. It is agreed in some quarters, from which we have received much light and leading in matters typographic, that more is demanded of the craftsman who to-day is called upon in one week to produce a number of jobs of different character, each calling for its own treatment, in every one of which the aim must be to make style and due emphasis suitable for the purpose for which the work is being done, than in an office where "the style of the house" is religiously adhered to, to set out the preliminary matter of a simple book; although so precious a thing is a book that only master craftsmanship is worthy to be used in its service.

CRAFT EDUCATION.

Let me again be somewhat personal, for I would speak to the many quite young craftsmen here this evening, as well as to others whose daily work may appear to be of a simple or ordinary kind. Because your work at present in the printing office may be of the simplest character, do not leave this meeting with the

idea that I am simply referring to work which is considered to be of importance, although all printed work is important in the doing of it. Nothing of the kind. That is no part of my task or my intention. Be sure of this, that as your craft mastery and love of calling increases so will your opportunities. Hence my appeal for craft study, serious, well-directed, systematic, and continuous; alike by the employer and the journeyman, the manager and foreman and apprentice. Surely craft education, if we would excel in the exercise of our calling, is as essential to success as elementary, secondary, and higher education for the loftier purposes of life, of business, and of intellectual enjoyment.

In a common love and a common service may be found the healing bond which will unite both the employing and the working printer, so-called.

WHAT IS A MASTER PRINTER?

If the master printer would justify his claim to that proud title, he must be more than the proprietor of a printing office. The employing printer is not necessarily a master printer, even though his large establishment entitles him to a considerable yearly subscription to the Federation of Master Printers. Listen again to old Barbour, on the office of a master printer: "I shall begin with the Office of a *Master-Printer,* because (as aforesaid) he is the Directer of all the Work men, he is the Base (as the *Dutchmen* properly call him) on which the Workmen stand, both for providing Materials to work withal, and successive variety of Directions how and in what manner and order to perform that Work."

The engaging and payment of a staff of men alone confers no such high warrant, even as the mere perfunctory setting of lines of type, just sufficiently well to keep his job in an office where "near enough" is the standard of quality, does not make a compositor into a craftsman.

I have asked for a reverent and gentle use of material at the hands of the workman so that the beauty of the types may not be marred. May I appeal to those whose duty it is, to see that as far as possible the offices for which they are responsible are equipped with types or matrices which will enable the worker to give full expression to the artistry and perfectness of his craftsmanship. Do not stifle and starve either your equipment or the spirit of your craftsmen. It is the life job of the worker even as it is the life business of the employer. His work may be one of the means, perhaps the only means, the craftsman possesses of expressing the art or poetry of his soul.

THE JOY OF WORK.

Interest in calling should be common to all of us printers—the only question of degree of craftsmanship is in knowledge, application, the seizing and making of opportunity, and love. The workman and employer here are on a common level, for, as Bishop Creighton has so well expressed it:

> "There is nothing in life except to enjoy what one is doing. It is the only source of happiness."

Take my job away from me, and you leave me poor indeed! How else shall we express ourselves? Our pictures must be painted by types and ink and paper; the poetry of our service must be read in the prose of the perfectly proportioned and suitable type page or job.

Many of you know that I wrought for some years in your city between forty and fifty years ago. One of those many Saturday afternoons stands out as clear to-day as if it was only yesterday. I had left my work for the week—the sun was shining even in Attercliffe*—and on my return home found the postman had delivered all the numbers then issued of Hailing's Circular. No collector who by his wealth has acquired a fifteenth century folio of masterly workmanship ever felt so rich, so truly satisfied, as I did that day. How I revelled in those endeavours of Thomas Hailing (and his brother William) to be a help to his brother printers, as well as an ornament to our craft.

Then commenced a more serious study, although the opportunites were very meagre, and the examples which came my way altogether less pure than those now at our ready disposition, a study which became daily more engrossing and which even to-day is essential to the true equipment and enjoyment of one's task.

LOVE OF CRAFT.

I fear that you may be thinking I am suggesting too much at your hands. The medicine I would prescribe for you I have taken these many, many years, and I still take it daily both before and after meals. I suppose that one of the things that can never die is a true affection. Love of craft, which is best expressed in service and sacrifice, will live on. Once get a sincere affection for our so splendid calling, and no toil will be too severe, no service shall be so acceptable, no sacrifice too great, if only we may acquire that mastery which shall the better enable us to express perfectly the measure of our devotion.

STUDY OF MODELS.

Let me beg you to acquire even a page of a book by an early master. Deprive yourself of some little luxury that you may become possessed of a piece of work by an acknowledged craftsman of to-day. Spend of your precious leisure among the typographical treasures of your city libraries. Compare notes with those who are like-minded. Form a little circle, if only of four or five, for mutual help. So shall

*Attercliffe is probably the smokiest district in the very smoky City of Sheffield.

craft mastery come, with the story of the development, as well as the knowledge, of the fundamental differences of character of type faces and material and of their use and presentation. You will be able to trace and understand in the work of the early printers, with their gothic types, their influence on the work of their successors, even down to present times. You will get a new understanding of the black letter types in use to-day. As you examine and closely study the transition types of Sweynheym and Pannartz, the romans of John and Windelin of Spires, of Erhardt Ratdolt, and the early Venetian masters, pride of craft will strive with admiration for craftsmen; and as you linger in contemplation of the perfect form of Jensen's roman, and his imitators, you will wonder if ever a roman type page appeared so beautiful as his. The romans of Aldus will set you thinking, and the use of his first italic founts, and those of his countrymen who immediately after began to print in the same character, will give you fresh study; the graceful types of the French printers and typefounders of the first half of the sixteenth century—that Golden Age of French typography—when pride of typographic place, having left Germany, became the possession of Italy, reigning there for some glorious years, to be the reward of the great printers of Paris and Lyons. The types of these masters, the typographic assistants used for the decoration of their pages, with their proportions, and their perfect bookmaking, will, like the pictures of a great master, present ever new and fresh joys and beauties as you come to their closer study and examination.

So with the types of Bodoni, creator of the modern roman character, a printer who compelled the admiration and gained the friendship of emperors and princes by the perfection of his craftsmanship, as well as those of the French type cutters which inspired him, with his lasting influence on the typography of his age and on ours; the sources of the inspiration which guided William Caslon in the cutting of his romans, his italics, his blacks, and his "flowers," shall become plain and understandable, bringing a familiar knowledge which will make our printer lives fuller and more complete.

HOW MASTERY IS GAINED.

Thus, when you come to work in types based on what we may term these three styles of typography, these great periods of printing history, on which and from which so much of our best material of to-day is based, a greater mastership shall come of increased knowledge, and with that mastership the joy born of complete confidence and greater abilty to serve. So shall come the more perfect knowledge of relationship, distant or close, of strength, of form, of those nice subtleties which separate, as well as those broad differences which distinguish faces and families of type from each other.

I have referred to the work of Sheffield craftsmen applied to the staple industries of your city. Even Chaucer, in The Reeve's Tale, must choose a Sheffield "thytel," evidently because of its quality of workmanship, for let it not be forgotten that London possessed in Chaucer's time cutlers equally cunning in craft: for generations they were Sheffield's great competitors. You have your Cutlers' Company with its Hall. London has its Worshipful Company of Cutlers and its Cutlers' Hall also, and years ago the cutlers of Sheffield and London vied with each other in producing the more perfect or more cunning piece of craftsmanship. You will perhaps have read how, on one occasion, when Sheffield had produced a more than usually remarkable example of their skill, they sent it to their London confréres with this message:

"Sheffield made both haft and blade:
London for thy life show us such another knife!"

and the London cutlers replied by making a knife, in the centre of the blade of which was placed a portion of the green leaf of a wheat stalk, telling their Sheffield friends that, if they could, they would find it unscorched. And they did. In the welding of the blade, by the subtlety of their craftsmanship, the London cutlers had kept the leaf unharmed. It is this spirit of keenness and thoroughness in the doing of our job that we must emulate if we would maintain worthily, and hand on unimpaired, the wonderfud instrument called the printer's craft.

THE SPIRIT OF SERVICE.

Printing has often been termed the handmaiden of the arts and crafts. Our craft is, as she has ever been, the servant of all arts, and crafts, and professions, of all men and things. Her services are acknowledged by all men, even by those who would have us prostitute her services to base ends and mean doings. It is a source of great satisfaction that there are so many printers in England, on the Continent of Europe, and in the Unied States of America, strongly imbued with this spirit of service, men who are maintaining in their own countries a high standard of technical excellence, who are happy to learn from the masterly examples of past generations of printers those lessons which shall best serve them in their special work. They are doing simpler, purer, stronger and more beautiful work because they have been encouraged to go to the fount whence alone issued the streams of pure typography—the works of our earliest printers. Then the means placed at the disposal of printers by the most enlightened typefounders, as well as the manufacturers of the two sytems of machine composition, leave those of us who are responsible for the furnishing of our offices without excuse to-day. We learn also of work-

ing printers who will gladly sacrifice holiday and leisure that they may exalt their calling by producing a perfect example of their craft. I often meet in London a number of working men, some of them in the forties and nearing the fifties, who gladly and regularly give an evening, after a strenuous day's work, that collectively they may help each other to greater craft mastery. This is the spirit of the true printer, and he who possesses it may claim relationship with the craftsmen whose successors they indubitably are.

THE HONOUR OF THE CRAFT.

The high renown of our craft must always be the measure of the service given by her children. And yet, probably the honour of our craft, and her high position, was never so threatened as they are to-day. According to some people the printer's type, with its glorious record of service, is to be deposed from its high estate, and be replaced by a typewriter and a camera. If the wit of man can produce something which will do the work for which the craft is so deservedly famous equally perfectly, cheaper, or more speedily, or both, then neither you nor I can, or ought, to attempt to stop the new process; but if it is simply another endeavour to cheapen production, at the risk of beauty and suitability, we must demonstrate by every means our intention to preserve and hand down to our successors, this great craft of ours, at least as pure and unsullied and as fit for its service to mankind as we received it.

There are those who would tell us also that there is no longer any need for our craftsmen to worry about study or training in the principles of display, or in that fuller knowledge I have been bidding you seek even at some sacrifice, because everything worth thinking about will come to us in a "lay-out"! The man with a stunt in his brain and a type-founder's specimen book at his hand will do everything requisite. If we lightly abrogate our job, and our powers to do it, we deserve to lose our privilege, which can only pass to others by our supineness and by our failure to prove worthy of our craft traditions.

FIRST THINGS FIRST.

Then in this age of machinery and of mass production there are those who call for "more, and yet more" output, to whom our craft is nothing more, nothing less, than a means to a financial end, a trade, a business—men who would see an honourable craft swallowed up in a mere matter of profit percentage. I have no use for printing that will not yield a fair wage to the craftsman and a fair profit to the master printer. These things are essential to the craft's wellbeing; but they should not be the beginning and the end of our craft association. It is to the credit of those who in this country and in others are responsible for the supply of both the loose type and the machine—the natural evolution of Gutenberg's invention—that they are alive to the necessities of the printer, and are calling to their assistance artists and others who can best help them meet the highest needs of the printer's craft.

If you would excel, then you must serve—that is fundamental. We printers are called to be the servants of all, and we ought to be willing to fit ourselves for the great task. There is no easy road to craft mastery; it is well there is not. Knowledge lightly gained is often lightly esteemed. The printer, like the painter, must labour long before he can perfectly express himself. It will only come by patience and study and loving sacrifice. Our craft calls to us, her children, for this service and this sacrifice. Other calls there are and other masters, but a nobler call and a higher service than to carry on the traditions and maintain the prestige of the printer's calling you will not hear.

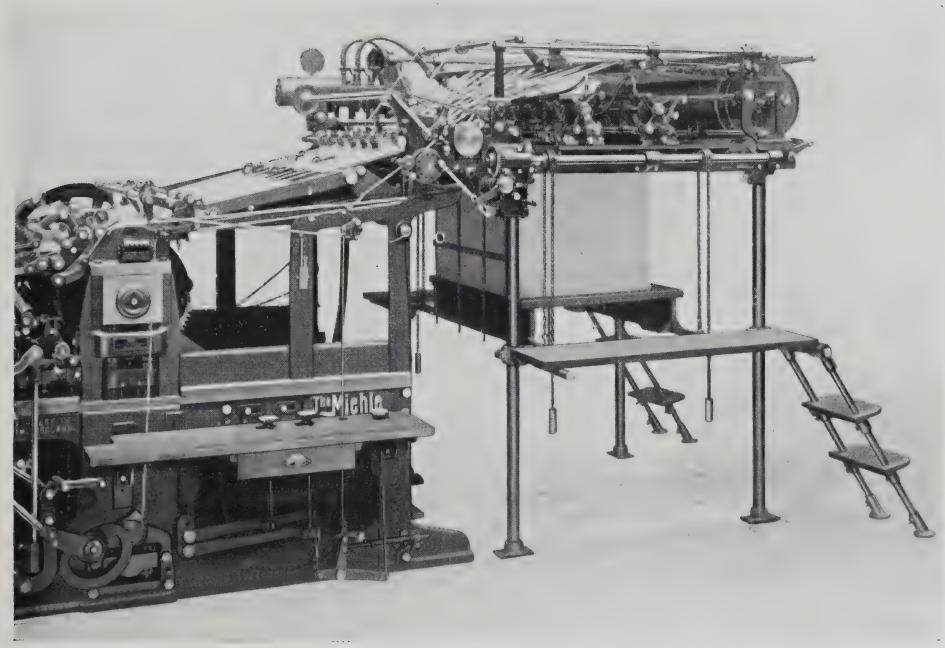
WILLIAM MORRIS.

To William Morris—to whom I have already referred, and whose influence is still strong in your city—must be given much of the credit for the great advance which set in and has been growing since the year 1891 towards purer, simpler, and more beautiful typography Many of us, even those who had for years been more or less single-mindedly giving time and strength to the advancement of our calling, will never forget the day when the first of Morris' books was placed in our hands. For myself I realised how little I knew, how great a fool I was, and how much I had to learn even after so many years of serious work. I sought an introduction to the master craftsman; to the man who, by patient labour in the mastering of detail, by his type design, his interview with papermakers, his experiments with paper and vellum, his careful inquiries into the manufacture of ink, his watchful collaboration with Mr. Emery Walker, and with Mr. Edward Prince who cut his punches, and by his finished work, became in its highest sense the master printer craftsman. I saw him at his house in Hammersmith, and he told me that he decided to print because of his love of beautiful typography, and because the form of type which he could approve would not carry sufficient ink to satisfy his idea of a perfect book face. He showed me many of the treasures of his library—the second library he formed. I remember so well the reverent care with which he handled each volume and pointed out the beauties of each and the suitableness of the types, specially of the fifteenth century German printers for the printing of fine books, and described the features of bookmaking which impressed him most strongly. William Morris, poet, scholar, artist, craftsman, friend of great poets and artists, became a great master printer craftsman because he gave himself heart and soul, and worked early and late, counting no

HAVE YOUR NEW MIEHLE EQUIPPED WITH THE

L&M PILE SUCTION FEEDER WITH SHEET-TURNING ARRANGEMENT FOR PERFECTING

AND THE MIEHLE COMBINATION EXTENDED DELIVERY



One of the important features of this Feeder is an arrangement whereby it is unnecessary to disturb the pile of sheets when printing the reverse side. To feed the sheets and turn them over, the pile is put into the feeder with the leading edge near the outer feed roller. The suckers then put the sheets on to the feed roller, which in turn carries them around the turning drum and between the carrying tapes, coming down on to the feed board again in the ordinary way. The pile feed board and pile delivery board are interchangeable with each other.

PRINTING TRADE EXHIBITION—Our exhibits of Linotypes and Printing Machines will be found on Stand No. 5, Row C; Stand No. 4, Row D; and Stand No. 4, Row F.

Write for a copy of a four-page descriptive folder, Ref. No. 808

LINOTYPE & MACHINERY LIMITED

9 KINGSWAY, LONDON

Please say you saw the Advertisement in THE CAXTON MAGAZINE.

task too hard, so that he might master his new craft. In this determination I often think he made a too great demand on a constitution less robust than he and his friends realised, which resulted in his untimely death. Excelling in all things because of the industrious application of his powers to the work in hand—for he knew, none better, that " he who would excel in art must excel also in industry "—this poet, this maker of beautiful fabrics, who specialised in the manufacture of stained glass, this producer of wallpapers of original beauty, who exhibited the highest degree of technical excellence in each, will live in the memory of man specially because of his association with and services to our craft, and this because he went daily, hourly, to the works of those early master craftsmen which he possessed, to the work of those printers who, in the early springtime of their craft, cut types as they thought types should be cut, and made books as they thought books should be made.

THE TRUE BEGINNING OF THE END.

Most of you will readily call to your remembrance the closing scenes of The Midsummer Night's Dream. The results of Puck's mischief-making have been repaired, and Duke Theseus, the Queen, and the re-united lovers, are to be entertained at a little play after their nuptials. The Master of the Revels tries to kill by ridicule the performance by Bottom and his friends, and in answer to Theseus' question " What are they that do play it? " replies

" Hard-handed men, that work in Athens here,
Which never labour'd in their minds till now,
And now have toil'd their unbreath'd memories
With this same play, against your nuptial."

The King's determination to hear the play calls for another endeavour on the part of Philostrate to stop the proceedings :

" No, no, my noble lord;
It is not for you : I have heard it over,
And it is nothing, nothing in the world,
Unless you can find sport in their intents,
Extremely stretch'd and conn'd with cruel pain,
To do your service."

to be met with some of the noblest teaching of Shakespeare, master craftsman, in which are enshrined the essence of the spirit of service in the words :

" I will hear that play,
For never anything can be amiss,
When simpleness and duty tender it.
Go, bring them in; and take your places, ladies."

to be followed later by lines which, equally with those, are an encouragement and inspiration to all true workers, when Quince, as Prologue, because of his fearfulness that their simple endeavours may not win approval, mixes up the following wonderful lines :

" If we offend, it is with our good will,
That you should think, we come not to offend,
But with good will. *To show our simple skill,*
That is the true beginning of our end."

To show our simple skill in the service of a great calling is the thing that matters. It is the true beginning of the end of all sincere workers. It is the true beginning of *your* end and of *mine*.

$250·00 For An Alphabet Design

ENGRAVOGRAPHIA invites the attention of all letter artists, designers and engravers to a competition for a new and official style of lettering for social engraving. The following regulations will govern this competition :—

First—Anyone may enter and submit one or more designs. Artists must bear in mind that this alphabet is intended for social engraving only, on copper and steel plates. Lettering of a commercial character will not be of interest. The style need not be a radical departure from those now in use. One of the regular, classic styles with sufficient modification to make it distinctive is suggested.

Second—Sketches must contain the full alphabet, capitals and lower-case, also numerals 0 to 9, inclusive. Size of capitals to be about $\frac{1}{2}$ in. to $\frac{3}{4}$ in. in height, with lower-case in proportion. Sketches may be submitted in pencil or ink, but, if accepted, the prize-winner must later furnish a finished pen drawing. It is essential that at least one line, in the form of a name or several words, either engraved or sketched in size ordinarily used on a calling card, should accompany the alphabet to show the relationship of the letters in combination, and further to permit of viewing the letters in the size in which they are actually to be used. Artists not in position to furnish same in engraved form, may prepare a workable size ink drawing and submit a sharp photographic velox print therefrom, reduced to proper size.

Third—Artists must not write their names on their sketches, but instead attach a card giving name and address, so that the designs may be submitted to the Executive Board and to the Convention by number instead of by name, thus eliminating all prejudice and favour, and assuring an unbiassed selection, based entirely on merit.

Fourth—There is to be one award only of 250 dollars. The Design Committee reserves the right to reject all designs and to make no award, if, in their judgment, none of the designs are suitable for the purpose.

Fifth—On payment of the award of two hundred and fifty dollars, all rights to the design pass to Engravographia.

Sixth—All sketches must be sent to Louis F. Bockmann, Chairman, Design Committee, 2222 N. Racine Avenue, Chicago, Ill., not later than June 15, 1925. Every wrapper must be marked " Letter Designer's Competition." Parcels should be sent by registered mail.

CRAFTSMAN'S CORNER

Devoted to plain, homely talks about Letterpress Printing. Design, layout, type, composition, illustration, paper and ink will all receive attention as occasion demands; and Specimens sent in for Review which contain features of special merit or interest will be reproduced in these columns.

CONDUCTED BY H. B. NAYLOR.

IN the April issue of THE CAXTON MAGAZINE, under above heading, detailed reference was made to the Collective Advertising Campaign of the Federation of Master Printers. There are many printers who consistently advertise in one form or another, and their persistence in such a policy suggests it pays to do so; but there are also a large number who either never do anything of the sort, or who only issue house literature spasmodically. To whichever section any of my readers belong: if they have issued, or have in course of preparation, any advertising matter supplementary to the Collective Advertising Campaign literature, I shall be delighted to receive copies of such productions, and will gladly devote a later issue of Craftsman's Corner to such work. (See concluding paragraph to these notes.)

Among those printers who have formulated a regular advertising campaign to enable them to keep in close contact with buyers of printing will be found the well-known Peckham printery of Cooper & Budd, Ltd., presided over by J. Albert Cooper, himself a practical printer with ideas. His chief item of propaganda work is his house organ, "The Peck-a-Mite," which is far less frivolous than its name implies. Every issue contains *at least* one article of practical interest to the buyer of printing, whilst it is also used as a medium for announcing, from time to time, latest additions to the C. & B. plant.

Such details have received notice in these columns in past issues, and need no further emphasis here; but I should like to refer briefly to one article in the March issue of "The Peck-a-Mite" under the title of "A Plea for Common Sense," which deals primarily with a "scientific" treatise on Harmony of Colour, as propounded in a circular which Mr. Cooper had received. This circular advertises a "system of colour harmony consisting of a colour keyboard and tables of harmonised coloured scales, upon which harmony is produced through the application of certain masks."

Mr. Cooper makes some very practical criticisms, from which I should like to quote the three following paragraphs as being thoroughly sound in reasoning and in practice:

"Harmony is NOT created instantly by the application of any number of masks to bands of colour, and technical (or at least artistic) knowledge is and ever will be required."

"No theory of colour harmony that does not take proportions into account, the factors of paper, ink opacity, brilliance or dullness of pigment, and *all* the determining items, can be of more than the slightest assistance."

"Any person trained in the use of colour knows very well that the effect of any two or more colours, or of a colour and black, varies not only according to the colours themselves, but according to the proportions of the various colours. To take a simple instance: I may produce a perfectly exquisite piece of type with a suitable initial in emerald green and the balance of my page in black; but if I reverse the colours, and put the type in green and the initial in black, the effect may be simply hideous. Or I may put a word on my page in red, and the result be beautiful. I may put six words, and the result be exceedingly dowdy."

This last paragraph so well embodies in a nutshell the secret of successful use of "colour" in printing that it is well worth enlarging upon.

Let us imagine we have a displayed job printed in black only, set out in two groups with an ornament separating them—no border or other decoration in the page.

Here the subject of tone harmony crops up. In just the same way as you would make the area of your type page (or its component parts) conform to the shape of the paper on which it is to be printed, so also it is necessary that these component parts or groups should bear some relationship in tone harmony one to the other. One good way of appreciating this is to place the job at sufficient distance from the eye so that it looks more like a combination of greyish masses of type than reading matter: then you will notice, if the work has been well planned, that these masses seem to support each other and do not become "fighting" units. It is more pleasing to the eye—which conveys all impressions to the brain—to have something that smoothly and pleasantly helps it on to read the whole message, than for this "something" to be thrust *violently* before the sight, as if to say, "Take that as something to go on with!"

And so it is with the ornament mentioned above. This should harmonise in tone with the mass of matter with which it is used. The greater the area such ornament covers, the more important does this become. If the supply of ornaments in the office does not permit the desired effect to be

obtained, then it would be better to omit. If the ornament looks too heavy in black, the alternative of printing it in a subdued colour might meet the situation, as printing it in colour would possibly help it to fall more into line as regards tone value. The heavier the ornament by comparison against the type, the more necessary does it become to tone down its aggressiveness. One will sometimes see a block, border or other decoration purposely treated by the half-line process to recede it and neutralise its dominating effect without robbing it of its decorative or suggestion value.

Suppose, however, the instruction came through that this job, consisting of two groups of type and ornament, was to be printed in two colours, what then?

You will probably find, if your job looks right in black, then to put any part of it (including the ornament) in colour will weaken it—and it is here that the *slightly* heavier ornament may be used with advantage. You will have the advantage of regulating the strength of the second colour according to the strength of the ornament. In such an example as this, do not print any of the type in colour except for some very special reason, such as having to set, owing to the limitations of the office, the main line in much larger or heavier type, or the reverse.

It is the policy in many offices to set up their two colour jobs in one forme at the outset, and dissect afterwards—I am not referring to work where colours are superimposed. Whilst it is difficult to lay down any definite law as a guide—local circumstances play such an important part—the parts that it has been decided to print in colour may be set slightly heavier or larger than if they were to remain in black, particularly if a subdued or delicate colour is used.

Where it is possible before the final dissection, proof up the *whole* forme in each of the two colours to be used, and cut out and paste up a combined proof to see the effect; modification of any plans can then be easily made without holding up expensive machines.

A job is often spoilt at the last minute because it does not pay to hold up two machines (or one) for this purpose.

Although it is not often successful, many printers will pick out in colours the capitals in a cap.-and-lowercase line. The colour in such circumstances frequently tends to weaken the effect, because, instead of strengthening the letters concerned and so giving them special emphasis, they make the line look spotty, and the capitals may even look small in gauge to the rest of the line—a defect not at all to be desired, especially after spending extra time on the work. More satisfactory results may often be obtained by making the capital letters a trifle larger—one size is generally sufficient—but this, again, will depend on the jump between the two sizes, six points larger being sufficient.

EXAMPLE 32

The small text in left-hand page was set in Windsor series (a heavy type), but it has lost tone value in reproduction. Both pages were finally handled by the lithographer.

If the job contains involved or intricate composition, or the formes are subject to long runs, then it could be cast in duplicate, and the approved pasted-up colour proof be sent to the foundry as a guide for the black part to be cut out of one plate, and the colour out of the other. Perfect register will then be assured, a great deal of time saved in composition, and a saving of wear in the type where long runs are concerned.

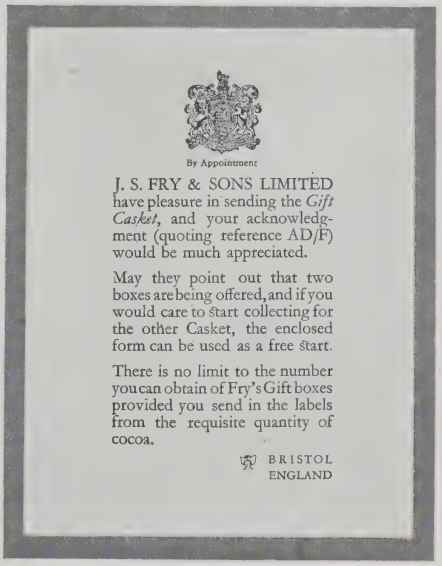
I hold no brief for any duplicating process; but if the job will stand the cost, electrotypes are preferable to stereotypes. The former cost more, but it should be possible to pass this on to the customer—as when you save thereby on the composition, honesty demands this saving should also be passed on. At any rate, after being electrotyped from, the printer should be able to return the type to case none the worse for wear; with regard to stereotyping from the type, however, especially if it be asked for "by return," the printer cannot always blame the stereotyper if, on returning the type to cases, it varies in height from the other type in case which has not been similarly treated. This is due to the great pressure sometimes applied in making the matrix from which the stereo is eventually cast.

Instances have come under my notice where type, for no apparent (?) reason, presents a variation in height in the machine proof, to the chagrin of the machine-minder and the disgust of the compositor who has to make the necessary changes. There are two contributory causes: One has already been mentioned—and where there is much stereotyping done, it would be far better to segregate such type and use it for the one purpose only. The other cause is very inferior quality of type metal. I am determined to keep these columns absolutely impartial, but I also want the printer to feel that I am his friend; and whenever I can legitimately warn him against pitfalls, I am out to do so. The printer may spend his money how he likes; but when he makes a bad investment, he must be careful to make sure the fault does not lie at his own door before he calls any of his staff "over the coals" for bad time-sheets, or other departments not under his control for inefficient workmanship. Buying cheap and shoddy material to save money is like stopping the hands of the clock to save time.

To return to our muttons and tone harmony. When using rule borders, it is well to remember that a double line invariably gives a better finish than a single-line rule. Under any circumstances, however many rule borders may surround the type, it is essential that one of them should harmonise in tone with one of the masses of type, and the others be subservient to it. What one might term the central or more important mass of body type would probably be the one to choose, because then the rule need not be too pronounced. Also, shaded rule is to be preferred to double- or treble-line rule where the face of each rule is the same. Whatever is selected, much will depend on the nature of the border and the distance rules are apart, as to whether the outer or inner rule border should harmonise in tone with the text. Attention to these little details will often give "character" to an otherwise very ordinary production.

In this subject of tone harmony is involved to an appreciable extent the use of heavy, light, or medium face types together. There are occasions when one feels this is absolutely essential, but it should not be adopted as a guiding principle merely to obtain emphasis. Emphasis for leading lines can generally be obtained quite satisfactorily with the larger sizes of a light series—either roman or italic—with which the text should harmonise. The more text there is, the easier does it become to use a heavier series for the main line.

It must not be inferred from these notes that there is no use for heavy type faces. Far from it. Bold treatment for close-up work sometimes acts


By Appointment

J. S. FRY & SONS LIMITED have pleasure in sending the *Gift Casket*, and your acknowledgment (quoting reference AD/F) would be much appreciated.

May they point out that two boxes are being offered, and if you would care to start collecting for the other Casket, the enclosed form can be used as a free start.

There is no limit to the number you can obtain of Fry's Gift boxes provided you send in the labels from the requisite quantity of cocoa.

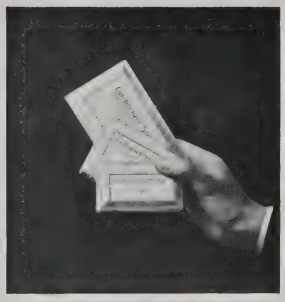
BRISTOL
ENGLAND

EXAMPLE 33
A Study in tone harmony, owing to reproduction in size here the Royal Arms at head have slightly thickened.

as an acceptable variation from the "classic" printing about which we hear so much nowadays, and which, when carried to extremes, defeats its own ends by becoming monotonous. But adopt a dignified style when using heavy types—their sole occupation is not to keep on punching, which is as irritating in its way as the other extreme. Heavy types have a definite use in poster work, for dark catalogue cover papers, and as "attractors" in many forms of general printing and advertising.

Example 32 (United Liberal Bazaar Handbook), opened out to show the first and last page of cover, will help to illustrate tone harmony and harmonious contrast. The actual dimensions of each of these pages is 7 in. by $9\frac{3}{4}$ in.

The left-hand page (Morris cars) tends more towards tone harmony; the word MORRIS at head, the illustration of the car, and the nameplate at the foot are the chief links in the advertisement (which has received bold treatment as a whole); whilst the scenic background gives an added charm to the car, and harmonises in tone



The Caribonum Stamp Pad

MADE IN THREE SIZES AND FIVE COLOURS

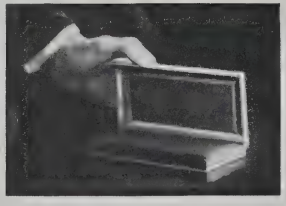
Size A 3½ x 2 in. 15/6 ea. Size B 4½ x 2½ in. 25/- ea. Size C 6 x 3½ in. 35/- ea.

Colours: Black, Blue, Violet, Green & Red, in tins to correspond—a blue pad in a blue tin, a red pad in a red tin, and so on.

Made by CARIBONUM LIMITED *at their* [illegible] LEYTON, LONDON, E.10 *where* [illegible]

The Aristocrat of Stamp Pads gives Delight to the Eye and Pleases the Fingers

GOOD WORKMANSHIP always pleases the fingers, whether the object is of polished steel or ivory. As you handle the *Caribonum Stamp Pad* the fingers are distinctly pleased. And the lustrous enamel finish of the case gives delight to the eye—the ivory white label makes it stand out from all others in striking relief. It is truly an aristocrat—not an aristocrat of the Louis Period, for the courtier of Old Versailles would be of little use in the world of to-day, but an aristocrat of the Commercial World. It is also a slave for service—in fact, it is built for service. One delighted user made 359,540 impressions with his *Caribonum Stamp Pad*. Each re-inking gave over 20,000 impressions.



Opens Easily with One Hand

THE lids of most stamp pad tins when closed either squash right down on the top of the pad, or they jam and will not shut completely. The Caribonum Stamp Pad box is different. At the bottom of the box runs a tiny ledge. Owing to this the lid cannot jam, and the most delicate fingers will not suffer hurt in opening.

The Caribonum Stamp Pad is easily opened always with one hand. And it is the same with every Caribonum pad: every part is made to a very definite standard. The Caribonum Stamp Pad is made automatically from beginning to end so that every box, lid, and pad fits

THE Caribonum Stamp Pad is properly called the Aristocrat of Stamp Pads, for it is better in design and appearance, better in workmanship and materials—really better in every way. And it is entirely British. That's another reason why it gives one pleasure to use it.

Lies Flat Upon the Desk

WHEN the lid of the Caribonum Stamp Pad is thrown back the whole thing lies flat upon the desk, instead of the lid sticking up in the air.

The pad is uniformly inked by a patented process so that every impression of the rubber stamp looks the same—clean-cut and definite, not smudgy and indistinct.

The pad is made of materials that must give good work. The covering fabric, the thick felts and the thick blotter are all so ductile as to ensure a constant flow of ink to the face of the stamp. The fine Egyptian cotton used for the covering fabric is so strong that it withstands the heavy wear of constant hammering by the rubber stamp

COLOUR of the most concentrated nature that money can buy goes into the ink used for Caribonum Stamp Pads. That is why the Caribonum Stamp Pad is a slave to service, as well as being an aristocrat in appearance.

EXAMPLE 34

The softness of the rich photo brown in the photogravures is not so apparent here—a tip worth remembering when choosing colours. Where colour may help a job, the same job printed in black may lose heavily in attraction value. The two lower pages should show fold between, as in the two top pages.

more with the type. The border and running-off side ornaments are firm in line, and printed in a rich red, all the rest of the page being in black.

In the original front page, the coloured background is treated in rainbow fashion, ranging from deep sky-blue at head, graduating through to green, yellow-red, and finishing at foot with dark brown, the border, silhouette figures and stall, and lettering being in black, the words "United Liberal Bazaar" at head having white centres (the chromo art on which it is printed). Here we have harmonious contrast, the colours, where they do not blend, helping each other by contrast to emphasise the various parts and consolidating the whole. It is a great pity the full colour effects cannot be shown here; but I hope my explanation and the illustration will make the example quite clear.

The left-hand page suggests letterpress, the right-hand page litho work; but, as a matter of fact, both these outer pages are litho.

This United Liberal Bazaar Handbook has a 64-page inset, and is a very fine production indeed for such a purpose. R. S. Addison, the Preston advertising specialist who edited the advertisement pages, in a little editorial of his own naïvely asks what is the first essential of a good advertisement, and then answers the question by saying that "The first essential is that it shall ATTRACT ATTENTION!" His next query is, "What is the first essential of attracting attention?" Answer, "Beauty!"

In this same booklet a wallpaper manufacturer heads his advertisement with the following trite remark: "The recollection of quality remains long after the price is forgotten." How true this is of printing equally as much as it is of other commodities, if we could only fully realise it!

R. Seed & Sons (per W. Culpan), 43, Guildhall Street, Preston, are the printers of this United Liberal Bazaar Handbook and Programme, and they have every reason to be proud of their letterpress and lithographic departments. There is just one question I should like to put to them: Did they try out other colour schemes before deciding upon green for the text and mauve for the border to each of the 64 pages? The reason this is asked is because there are so many fine-screen halftone photographs and illustrations that it seems to me the more appropriate colours would have been a deep photo-brown or sepia for everything except the borders, for which orange could have been used. This is put forward more as a suggestion than a criticism, because I feel sure there was a special reason for so much green being used.

Example 33 (J. S. Fry & Son, Ltd.) is a good example of tone harmony. This has been set in Garamond, and printed in rich brown on Jap vellum. Actual size $3\frac{3}{4}$ in. by 5 in.

Instead of using the new 1924 Royal Arms—which is squared up, and is massive and rather cumbersome-looking—they have preferred to keep to the lighter 1909 authorisation; and because it matches the type in tone, it is an ornament as well as an advertisement. The whole of the printing might have gone a little higher on the paper, but otherwise it is a charming little piece of work.

Example 34 (Aristocrat of Stamp Pads, etc.) shows four pages of another fine study in colour harmony.

Set in Caslon Old Face, roman and italic, and printed on buff stock in a rich photo brown, the illustrations are pasted-on photogravures. Size of single page $8\frac{1}{8}$ in. by $10\frac{3}{4}$ in.

The simplicity of design, symmetry of proportions, margins, size of types, and realistic illustrations (photographs from life), and the interesting way of presenting the subject, form an ideal object lesson to the student of psychology in advertising. The top of this example shows pages 4 and 1 (in order as leaflet is opened out), the lower half showing pages 2 and 3 of the same job. This may have been an expensive advertisement to produce; but no one with an eye for quality printing would ever dream of consigning it to the waste-paper basket.

I do not think I am exceeding my province in recommending all my craftsmen readers to be sure to go to the Printing Exhibition at the Royal Agricultural Hall, Upper Street, Islington, N.1 (from May 16 to May 30). This is the age when mechanical production is making rapid strides in every department, and there is a tremendous amount to be learnt in this direction at these exhibitions. My advice is: Do not bend your will to machinery, but educate yourself up to the standard which the limits of machinery cannot reach; and so make it an accessory to your work instead of you becoming an accessory to the machine. One or the other must prevail—make sure *you* are the winner!

APPRECIATIONS.

E. G. BERRYMAN & SONS LTD. (GREENWICH).—The second number of "Impressions" is better than the first—which was good. I would suggest, however, that the three blues create a rather chilly atmosphere, and need warming up with orange or even brown. Why not try the idea of a warm colour scheme for winter and a cold colour scheme for the summer issues—but do not be too pronounced either way.

CARIBONUM LTD. LEYTON, E.10. (PER J. V. STEER).—Your folders are all first class advertising literature. The short and expressive titles—"The Aristocrat of Stamp Pads," "A Bargain Bottle of Ink," "The SECRET of a beautifully clean carbon copy"—are most attractive because of their simplicity and directness of purpose, whilst the subject matter is arranged in dignified yet attention-compelling style. "The Aristocrat of Stamp Pads," reproduced in this issue shows very good taste.

NICKELOID ELECTROTYPE CO. LTD. (PER J. DAWSON).—Your latest folder strikes a high note of quality and enterprise. This is essentially a fine specimen of printing, interesting historically and pictorially, and when one unexpectedly reads an unobtrusive note to the effect that the complete specimen has been printed from Albert Galvano electros, and subjected to the Ultimatt treatment, it is proof that trade advertising is indeed undergoing a revolution. I do wish you had included a stiffener in the envelope—my copy is a fine piece of craftsmanship spoilt in the post.

R. SEED & SONS, PRESTON.—It was quite a treat to look through the U.L.B. Programme, and you will notice I have dealt with the cover in this issue to demonstrate certain points. I should, however, like to suggest to the advertising editor that he lost a fine opportunity of "showing his own wares" when he allowed his own advertisement to be set up in Grotesque No. 8 (a heavy sans serif letter) and ordinary old style roman.

I shall be pleased to receive specimens of printing at any time, and will gladly acknowledge same in these columns, and items of general interest will be reproduced. Noms-de-plume may be used by contributors if they prefer to do so. All specimens and correspondence for Craftsman's Corner should be addressed direct to H. Naylor, 8, Aubert Park, Highbury, London, N.5.

What is Good Typography?*

By L. A. BRAVERMAN

WHEN I was younger I attended a number of lectures on typography, and, to be perfectly frank, I always anticipated more than I really got out of them. I often expected that somebody would show me the typographic bag of tricks and then I would know all there was to be learned about typography. I have not as yet met the magician who would let me peek into the bag. As a consequence, I am still studying hard and trying to learn. If you are expecting to see a bag of tricks, I want to tell you beforehand that I haven't it, and you may be disappointed when I get through with my talk.

More has been written on typography than on any other single phase of the graphic arts. Considerably more will be written and said before the subject will be thoroughly understood. In almost every gathering of printers there seems to be need of someone to talk on this subject, and nearly every printing magazine has lengthy articles on it. It seems to have greater interest for the printer than any other subject has.

GOOD TYPOGRAPHY NOT DIFFICULT.

I have often wondered why all this writing and talking is necessary. Is it because the subject is so difficult to master? I don't believe it is. I rather fancy that there is an erroneous impression as to what good typography really is. I rather believe that some of us do not realise its importance in our daily work. I believe that some of us feel that good typography is all very well for those who are engaged in producing de luxe books and the so-called "art printing," but that for those of us who are engaged in printing "commercial work" there is really no need to know much about it. Another false impression prevails that good typography is expensive, and that as ordinary commercial work there is no market for it. These are far from the facts.

What is good typography? The word good is only a relative term. To some people it may mean one thing, to others another. Really there is no mystery about typography. All can do good work if they will only try. I might liken typography to golf, baseball, football, or any other sport. If you are interested in sports, you know only too well that there is no one who plays the game to perfection. Babe Ruth, who is considered to be the greatest ball player to-day, is not perfect. If he were, he would be able to knock a home run every time he stepped up to the plate. If Walter Johnson were a perfect pitcher, he would be able to strike out every man that faced him. No one is perfect. No single individual knows all there is to know about it. Even masters like D. B. Updike and Bruce Rogers, who are recognised as the best typographers of to-day, concede that they don't know it all, and that they are only doing the best they know how. Only last week I spent a whole afternoon with Mr. Updike, and he showed me a number of pieces of printed matter which he had produced and which he criticised. I asked him why he had not corrected the things he was criticising at the time they were being produced, and he said that he had done them as well as he knew how at that particular time, but that now he knew better. He further stated that he knew to-day considerably more than he did ten years ago, and that ten years hence he expected to know more than he does to-day. He is always studying and improving and doing his best at all times. Some of us who are book collectors and who own some of Mr. Updike's books have probably noticed a watermark in some of his papers. This watermark consists of a circle with a letter M in the centre and a star directly above it. The letter M, of course, stands for the name of his press, The Merrymount Press. The star symbolises his "hitching post," as he calls it. It is a mark of perfection towards which he is always striving, but never attaining.

CHAMPIONS OF THE CRAFT.

Isn't there a lesson in all this for us? Let us for a moment revert to the subject of sports. The baseball player, fighter, or football player who is continually striving to do his best and constantly applying himself to his work eventually becomes a champion. Mr. Updike, whom we might term a champion of typography, admits he is doing the same thing. Why shouldn't we do likewise? We should! And the way we can do it is by constantly doing our very best on every job of printing—be it a ticket for a dance, a program, a price list, a menu, or what not. These are the things on which we should practice and always try to make the job as good as we know how so that eventually we, too, will be able to do excellent work. The belief that one must have plenty of time, a great outlay of money, and the finest materials with which to produce a fine job is not correct. It is undoubtedly true that many of us feel at times that a customer will not allow us sufficient time in which to produce a fine piece of work. It is also unfortunate that the printing business as it is to-day is so conducted that a great many jobs are printed at very little or no profit. But there probably never will be a condition when a customer will be willing to spend unlimited money and to give us unlimited time to produce as fine a job as we know how. The printing business as it is to-day will not permit of this, and as a consequence we must be primed to do the best we can under all conditions.

FUNDAMENTAL PRINCIPLES.

A great deal has been written about the so-called fundamental principles of typography, about harmony, colour, contrast, balance, proportion and symmetry. Any one of these is almost a life study in itself, and the strangest part is that they are not at all necessary to a knowledge of good typography. I know that typographers of note never think of these things in laying out a job. If these principles are the standard on which good typography is based, much of our best work of to-day would become exceedingly poor. There are, however, a number of different factors, a knowledge of which is necessary in order to be able to produce good typography. But these are the materials with which we work, and not something elusive. These factors can all be learned by study and constant practice, and by persistently striving to do the best on every job. They are a knowledge of good and bad type

*Address delivered by L. A. Braverman, at the Convention of the District Typothetæ, Cincinnati.

LINING CASLON OLD FACE

ROMAN

56 A 212 a 8-POINT 8 LBS.

REMARKABLE INVESTIGATION RECORDED

SOME of William Caslon's bookbinding punches were noticed for their neatness and their accuracy by Watts the eminent printer, who encouraged Caslon to practise the letter-cutting and also introduced him to a number of the leading printers of the day. About this time the

46 A 180 a 10-POINT 10 LBS.

INTERESTING HISTORY OF TYPES

WHILE he modelled his letters on Dutch types they were much better; for he introduced into various founts a quality of interest, a variety of design, and a delicacy of modelling which few

38 A 140 a 12-POINT 12 LBS.

DISTINCTIVE TYPE DESIGNS

THE merit of the Caslon Types was not only in their careful cutting and founding, but in their distinctiveness

32 A 120 a 14-POINT 14 LBS.

UNIQUE ILLUSTRATION

STEEL engravings showing some very interesting features relating

26 A 66 a 20-POINT 20 LBS.

MYTHICAL NOTES

RARE Manuscripts found

20 A 52 a 22-POINT 20 LBS.

ROMAN RECORD

THE Production herein

ITALIC

56 A 212 a 8-POINT 8 LBS.

REMARKABLE INVESTIGATIONS RECORDED

Some of William Caslon's bookbinding punches were very neat and accurate in design, and Watts the eminent printer encouraged Caslon to persevere in letter-cutting, and also introduced him to many of the leading printers of the day About this time another famous printer became known to

46 A 180 a 10-POINT 10 LBS.

INTERESTING HISTORY OF TYPES

While he modelled his letters on Dutch types, they were much better; for he introduced into his founts a quality of interest, variety of design, and a rare delicacy of modelling which few Dutch types have

38 A 140 a 12-POINT 12 LBS.

DISTINCTIVE TYPE DESIGN

The merit of the Caslon Types was not only in their careful cutting and in good founding, but in their distinctiveness and

32 A 120 a 14-POINT 14 LBS.

UNIQUE ENGRAVINGS

Steel Engravings showing many interesting features which relate

26 A 66 a 20-POINT 20 LBS.

MYTHICAL NOTE

Unrestricted in comments

20 A 52 a 22-POINT 20 LBS.

ROMAN RECORD

The Products Described

Peculiar Italic Sorts: *A B C D E G J K M N P R T U Y b k v w* *Supplied to all sizes.*

Manufactured on Point Bodies in Six Sizes by

H. W. CASLON & CO. LIMITED

HEAD OFFICES: 82 & 83 CHISWELL STREET, LONDON, E.C.1

Telegrams: "Caslon, Phone, London." Telephones: Clerkenwell 2740, 2741, 2742, 2743

AND AT MANCHESTER, GLASGOW, & DUBLIN

8-PT. BORDER NO. 10

Please say you saw the Advertisement in THE CAXTON MAGAZINE.

faces and their combinations, the proper spacing between words, the proper leading between lines, the proper indentation of paragraphs, the proper margins, a sense of colour value, and, above all, good taste. All these things can be cultivated.

STUDY OF BEST MASTERS.

Books from the presses of the early master printers and from our present-day contemporaries are a fruitful source for the cultivation of these things. A study of the early books, and those of Mr. Updike and Mr. Rogers and a few other good printers, will show us with what infinite pains the words were spaced to get colour into the page and to make it easy to read. How well they have overcome the ugly rivers which so frequently mar the appearance of the page! How well the lines have been leaded to enhance the beauty and legibility of the type! How well they have handled the indentation of their paragraphs to make the page inviting to read! The care they took in getting the proper margins so that the pages when placed together formed a harmonious unit rather than two separate pages! The fine type faces they have used—giving strength and character to the page! How charmingly they have used ornamentation to decorate their work! By studying these things you will soon get an appreciation of what real good typography is. The same elements that enter into these fine books also enter into the making of the most ordinary piece of printing.

We may get an idea here that to attain like results would be very expensive, and that we could not get the price for this kind of work. This is not so. In selecting a type face for a job, it is just as easy to use a good face as a poor one. If the job is to be set on the monotype machine, good spacing can be had if the operator will take a little extra precaution. In matter set by hand, good spacing is very easy to get if the compositor will take a little pains. Proper leading and indentation are very simple to get. The stone man can lock up a form with good margins just as easily as one with poor ones.

ADVERTISERS KNOW GOOD PRINTING.

Advertisers to-day are fully aware of the importance of good typography in their advertising, and the printer who can produce effective advertising printing is in great demand and can practically dictate his own price. There is just as much opportunity to display our knowledge of fine typography in advertising as the early printers displayed in producing their fine books. There are limitless arrangements in advertising which are not possible in books, yet the nearer a piece of advertising matter conforms to the standards of a book the more nearly perfect in appearance it will be. Advertising is one of the greatest factors that give us the opportunity to produce fine printing. Millions upon millions of pieces of advertising matter, ranging from single-leaf circulars to the most pretentious catalogues running into hundreds of pages, are produced yearly. Advertising is not only one of the best possibilities for fine printing, but it is also the greatest single factor which makes possible the printing business of to-day. It is to this form of printing that we must turn for a means of expressing our taste in typography.

In advertising, good typography is of the utmost importance. Good presswork is necessary to produce good advertising, as are good paper and good engravings, but all the good things in the world will not compensate for a poor job of typesetting. Good typography is the foundation of the advertising structure, and if the typography is permitted to be poor the structure itself is bound to topple.

DON'T COPY SLAVISHLY.

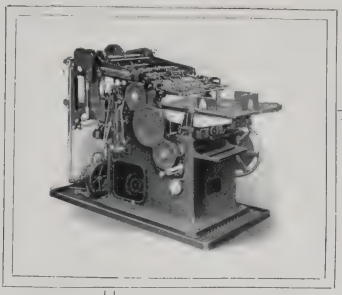
In studying the works of the early master printers and those of to-day we must take care not to follow their examples too closely. In my experience I have never found it practicable to use the arrangement employed in some early specimen and adapt it to the job at hand. The printer who copies bodily usually loses sight of so many details embodied in the original design that he loses entirely the beauty of the original, and not only will the job be spoiled, but the all-important factor of taste will never be acquired. It will not take us very long to learn the difference between good and bad type faces; we will soon learn the art of good spacing and leading; it will not take us long to acquire the sense of good margins, but the all-important factor of good taste or style will not be so easily cultivated. Here we must apply ourselves most persistently, and we will hamper ourselves considerably if we copy.

GET YOUR OWN STYLE.

Let us get knowledge, ideas and inspiration from every source; if we really try, we will evolve a style all our own which will be recognised as if stamped with our name. The best artists of to-day go to the early woodcuts and to the French and Italian Renaissance for inspiration. They even go so far back as to study the Phoenician, Assyrian, Egyptian and Roman architecture, where they find a wealth of material. Why shouldn't we printers follow their example and study the early masters of printing and our modern contemporaries? We will find a great deal of pleasure in studying and collecting fine books and, incidentally, we will find it profitable. The works of Bruce Rogers and Updike can be purchased at no great expense. The works of some of the early master printers can also be had at reasonable prices. There are some private presses in this country producing excellent work which can be obtained at no great outlay. There is a wealth of material in every museum in this country. Antique rugs, antique furniture and antique silverware offer wonderful inspiration for borders, cartouches, head bands, and other decorative material for the artist. The manuscripts and books in libraries also have a wealth of material for the printer.

INSPIRATION IN A CEMETERY.

While on vacation a couple of weeks ago I had a peculiar experience, which I mention merely to show that ideas and inspiration can be obtained from the most unusual sources. While I was in the country, an artist friend of mine informed me that there was a very old cemetery close by, and suggested that we go there to examine the tombstones. Imagine our surprise when, on getting there, we found some stones dated as far back as 1772. The stones from that date until about 1800 were cut with the most beautiful lettering that we had ever seen. The colonial style was very charmingly portrayed. In studying the stones that were cut after 1800 we saw the change in style of the lettering, and could trace the gradual degeneration of the pure colonial style to the Victorian period. We could also trace the gradual change from the Victorian period up to the present day. Here we had before us a complete history of typography from 1772 until the present. The stone



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cutters adopted the same styles that prevailed in printing at the time the stones were cut. In the early colonial period the lettering was of an old-style design with peculiar ligatures appropriate to the times, a touch here and there of ornamentation. Later the serifs on the letters were made longer and sharper. The thick and thin lines were made more contrasting, showing the gradual influence of the modern types of Bodoni and Didot. Still later we saw the effect of the curved, twisted rule period with which we are all so familiar. We then saw the block type, commonly called gothic, coming into vogue, and then a reversion again to the more simple forms as we now have them. We spent a whole afternoon there, and I can assure you it was well worth the time.

THE UPWARD TREND.

There is a marked trend toward a higher appreciation of good typography on the part of buyers of printing. Those of us who see this trend and are in position to grasp the opportunity will profit thereby. Notice the tremendous growth in advertising composition houses. They exist and prosper only because advertisers feel they can get better work from them than from the average printing house. And their rates for composition are usually much higher than the average. There are some in this audience who are continually trying to do fine typography, and from all indications it appears that they are prosperous. The printing business to-day is not good, yet the shops that produce fine work and good typography *are* busy. From my own experience I know it is much easier to sell printing which has good typography than the other kind, and, incidentally, there is more profit.

Before closing I want to leave this thought with you: It is not difficult to produce good typography if you will only try. The material for ideas and inspiration for a thorough understanding of good typography can be easily procured. The all-important factor of taste can be acquired by study and work. Most of all, you will have a lot of fun in doing it, and eventually you will make more money in your business.

Exhibition of British Printing

THE Exhibition of British Printing arranged last month at the London School of Printing and Kindred Trades, Stamford Street, was arranged with a view of demonstrating that a high standard of the printer's art and craft is attainable in Great Britain. Following upon the exhibition of continental printing held at the school last Christmas, when a comprehensive collection of printing gathered by Mr. J. R. Riddell, Principal of the London School of Printing, during the visit to printing centres on the Continent studying printing methods and processes, was exhibited, the Exhibition of British Printing served a very useful purpose by demonstrating that British printers can turn out work equal to that produced on the Continent.

The exhibition covered a wide variety of different methods of production, including colour collotype, photogravure, offset and letterpress processes. Although the exhibits are of a commercial character, they are of high artistic merit and embrace all grades of printing: newspapers, periodicals, circulars, catalogues, books, colour printing, posters (including those issued by the Underground and L.M.S. Railways), and box making.

Among the firms contributing to the exhibition were the following: The London Stereoscopic Co., Ltd.; C. & G. Ponton; Hazell, Watson & Viney, Ltd.; Newnes & Pearson Printing Co.; Suttley & Silverlock, Ltd.; the Amalgamated Press, Ltd.; Edmund Evans, Ltd.; Sanders, Phillips & Co., Ltd.; Eyre & Spottiswoode, Ltd.; The Curwen Press, Plaistow; Geo. W. Jones; Clarke & Sherwell, Ltd.; Blades, East & Blades, Ltd.; Waterlow & Sons, Ltd.; Bemrose & Sons, Ltd.; Rembrandt Intaglio Printing Co., Ltd.; Langley & Sons, Ltd.; Boots Cash Chemists; Thos. Forman & Sons, Ltd.; Hudson & Kearns; Underground Electric Railways; London Midland & Scottish Railway Co.; University Press, Glasgow; Spottiswoode, Ballantyne & Co., Ltd.

Among those present at the opening ceremony were: Lord Riddell; Mr. C. W. Bowerman, M.P.; Mr. W. B. Wykes (President of the Federation of Master Printers); Mr. Alfred Langley (President of the London Master Printers' Association); Mr. John Fry, Mr. J. J. Keliher, Mr. Edward Unwin, Mr. Rupert Kneale, Mr. Wilson Howes, Mr. F. Colebrook, Mr. Wiborg and Mr. Chas. I. Ferguson (Ault & Wiborg), Mr. W. J. Pincombe, J.P. (Education Committee of the London County Council), and Mr. J. R. Riddell.

Lord Riddell, in opening the exhibition, described it as displaying in a remarkable manner the progress that had been made in every department of printing. It was customary, he said, to talk about the good old days, but he doubted whether the printer of that period could turn out anything like the work that was before them that afternoon. The school was performing a very important duty in training the printers of the future. It had in its ranks young men from different parts of the Empire. On behalf of the school, which had grown to 2,300 students, he had to thank the Education Department of the London County Council for the cordial interest they had displayed in its work. It was another example of the eternal triangle. They had the London County Council, the masters, and the men all combining to improve printing. It was pleasant to observe, also, that the trade unions displayed great interest, and it was in the interests of the men, the masters, and the unions that training should be provided for printers. In the old days that was offered by the apprenticeship system. That, however, had fallen into desuetude, and had been replaced by such instruction as was given by the school. The institution had been started by joint contributions—a part of the expenditure was borne by the London County Council, and there were contributions from the masters and from the trade unions. It was a remarkable achievement, and he thought it was the true way to industrial peace.

On the proposition of the Right Hon. C. W. Bowerman, M.P., Mr. W. J. Pincombe, and Mr. W. B. Wykes (President of the Federation of Master Printers), Lord Riddell was thanked.

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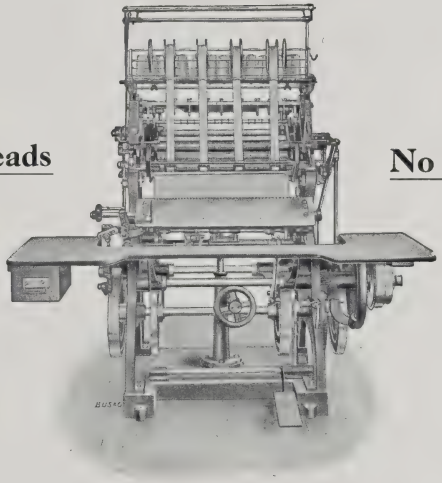

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Home Counties Annual Meeting

Lt.-Col. Fletcher on Labour Troubles

THE annual meetings of the Home Counties Alliance were held in London on April 21, when Mr. H. H. Potts, St. Leonards, succeeded Mr. A. Le Pine Strange as president. Mr. R. A. Austen-Leigh at the luncheon said one of the good things the federation of the printing trade had accomplished was the number of excellent secretaries it had unearthed, and certainly there is agreement that Mr. Percy Michael is one of the best of these.

In presenting the annual report of his executive, this gentleman regretted they were unable to give particulars of such spectacular occurrences as the estimating campaign of the previous year, but very useful necessary work had been undertaken on behalf of the membership. The estimating campaign, carried through by the ex-president, Mr. S. F. Oxley, had made such an impression on the Federation as to cause its extension to the whole of the other Alliance areas. When Mr. Strange succeeded to the presidency, he asked members to assist in the production of the volume of specimens of printing by contributing jobs, together with the records of actual times taken to produce the original orders. It was hoped that very shortly the completed book would be in the hands of members. With last year's annual report was issued the account of a very interesting conference held on April 28 between the Council of Home Counties and South-Eastern Group of the T.A. and the Home Counties Alliance Executive Committee. At that conference there was a frank discussion as to the desirability and possibility of forming a number of District Committees of the Joint Industrial Council within the area of the Alliance. On May 14 the Executive appointed a small committee to co-operate with a similar number representing the T.A., and it was now reported that District Committees have been formed at Portsmouth, and for the southern portion of the Bucks and East Berks Association, and there was the prospect of such committees being formed at Aylesbury (for mid-Bucks), Chatham, Brighton and the Isle of Wight.

The following officers were elected: Senior vice-president, Mr. Oscar Viney (Aylesbury); junior vice-president, Mr. L. B. Mackay (Chatham); treasurer, Mr. David Greenhill.

During the proceedings a telegram of fraternal greetings was received from the Typographical Association Groups of the Association area.

Mr. Potts outlined a scheme for a summer school for young master printers and the sons of master printers where for a few days such men could be gathered together and helped in relation to the larger aspects of business life, and where they might be introduced to such subjects as "The Relation of Employers and Employed," "The Costing System," "Salesmanship," "Printing Office Layout and Plant," and "The Trade Union Movement from Both Points of View." It was suggested that such a gathering might be held in congenial country surroundings, and where with social intercourse and sport a good and profitable time could be spent. The suggestion was received with general hearty approval.

At the luncheon Mr. Le Pine Strange presided. The toast of "The Federation" was proposed by Mr. H. H. Potts, who with some knowledge of the inner working of headquarters was highly appreciative of the unselfish work done by the members of the Federation Council on behalf of the whole trade.

Mr. A. E. Goodwin, replying to the toast, said there was no alliance in the country which more loyally supported the Federation than that of the Home Counties. Referring to the article in THE CAXTON MAGAZINE of two years ago on "What does the Federation do for the small printer?" he said very forcible things might be said on "What the small printer does for the Federation." Reviewing the work of the parent body, Mr. Goodwin spoke of the success of the collective advertising campaign, especially because it had directed the mind of the printer to study the problems of advertising and his relation to them much more closely. He urged Alliance members to feel that the Federation belonged to them, and that they were an intrinsic part of the organisation.

"The Home Counties Alliance" was proposed by Mr. Alfred Langley (President of the London Alliance). He referred to his hosts as the nearest neighbours of his own Alliance and their keenest competitors. He envied the country printer who was able to mix a little business with a great amount of pleasure, and who could come into London and take away such magnificent orders. He was deeply grateful to them for standing by London in the recent labour trouble, and he thought it a great objective that the alliances should be drawn closer together. He hoped they would all broaden their outlook so that the Federation would be able at all times to legislate wisely and well for the troubles which beset the whole industry. He looked forward to a time when they would have a federation having complete control of all the essential factors in the industry—from production to consumption—and be able to legislate on unfair trading amongst themselves, as well as on labour troubles from without.

Mr. Le Strange, in reply, admitted a certain amount of pride in the work initiated and carried through by some of their past presidents, especially that of Mr. Oxley on operational times. He had been amused that other alliances who received their findings with suspicion and incredulity, when they came to work out the problem for themselves, found they were just as bad.

Mr. R. A. Austen-Leigh proposed "The Visitors" in one of his sparkling and witty speeches, and this was responded to by Lieut.-Col. Fletcher, and also by Mr. W. Whyte (secretary of the London Master Printers' Association), who was no whit less brilliant and amusing.

After luncheon the conference was resumed, when the principal items were addresses by Mr. A. E. Goodwin and Lieut.-Col. Fletcher.

Mr. Goodwin spoke on the work of the Joint Industrial Council, and referred to the volume of goodwill which had been created by its agency. It was good to know that the mediating influence of such a body was ready at any time of crisis. It was difficult to get the District Committees going, but all those which had been formed were doing very useful work, and in no single case had any-

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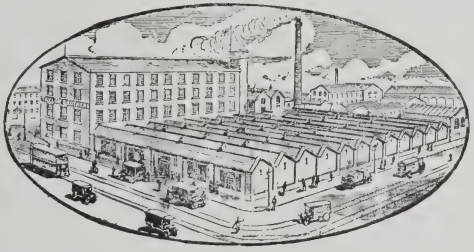

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thing been done damaging to the industry. He called attention to the convention on the work of the Council which is to be held at the Exhibition. Valuable work had been done by many district committees in relation to technical education, and united representation to educational authorities in various areas had resulted in great good. He believed there was a growing feeling of greater responsibility on the part of every section of the trade toward the J.I.C. movement.

Lieut.-Col. Fletcher, past-president of the Federation of Master Printers, and chairman of the Labour Committee of that body, then gave the meeting a review of the labour position in the printing industry. Labour questions loomed largely on the horizon of their work, owing largely to the aggressiveness of a certain section of men in the labour movement. But it was to be remembered that these men had their own work to do, and the men they represented had not always been treated as they should have been by some master printers. There were black sheep even in the Federation, and it was part of their work to keep their own members straight. They had every reason to be proud of the recent settlement, which was a splendid vindication of the Joint Industrial Council, and also a strengthening of the hands of those saner members of trade unions who always preferred to see settlement by negotiation rather than force. The future was fraught with a certain amount of anxiety. The recent settlement with the Typographical Society was likely to be repudiated by the news hands. Yet they had obtained an advance of 4s. a week in some areas and one night a fortnight in the case of night hands, and one day a fortnight in the case of day hands on a balancing of time arrangement. A thing almost lost sight of was the question of the re-grading of towns. But this matter was by no means dead, and as soon as the Unions agreed how the Federation could be approached jointly, the vexed question of increasing the London area from a radius of 15 miles to 20 miles would come up for discussion. He assured those present—many who would be vitally affected by such a change—that such an alteration would be strenuously resisted by the Federation. It was a difficult question, and would tax their ingenuity to deal with it. They were not proud of the lithographic settlement recently made, but they were by no means united. Anyhow, it was better to have a settlement by terms than to have a forced one. The attempt of the Litho Union to put Portsmouth, Winchester, Bournemouth, and Salisbury in Grade I. was to be discussed in the near future. It seemed an unreasonable request. Referring to the recent dispute, the actual point at issue did not affect many of them, but the constitution of the Joint Industrial Council was being attacked, and an affiliated member of the Federation was being attacked. It was their duty to stand by this member, and the settlement vindicated the principles for which they were always prepared to contend. He had little to say about future labour prospects; but the next few weeks would see the demand of the London Society of Compositors for an extra 7s. a week in all jobbing shops in the London area. He considered London was being made to pay through the nose for its labour, and this latest move of the Union would be strenuously opposed, for jobbing printers were quite unable to pay the rates agreed to by rich newspaper proprietors.

Bookbinders Confer

BOOKBINDERS from all parts of the London area are gathered together under the auspices of the Society of Arts on April 22 to hear a lecture from Mr. — Chivers, of Bath. This gentleman is one of the masters of the craft, and has brought the whole bookbinding trade, both in this country and America, into debt to himself by his patient investigations both into paper and binding materials, and methods, and the ingenuity with which he has adapted the bookbinding art to the changing conditions both of paper making and popular usage of the bound books, particularly those issued from public libraries. There was not a very large attendance, but those present were all keenly interested in the subject, and were evidently either bookbinders themselves or book lovers. The meeting was made all the more interesting by being presided over by Mr. Emery Walker, whose work in book production and the highest class of printing is well known, and to whom such warm tribute is paid in the recently published book on William Morris. Mr. Walker was associated with this great soul from the beginning of his printing enterprise, and Morris was ever ready to turn to him for counsel. Mr. Walker had not much to say, but followed the proceedings very keenly, and asked the lecturer a number of questions.

Mr. Chivers was really concerned in supplementing the important report on Bookbinding, issued by the Society of Arts in 1901.

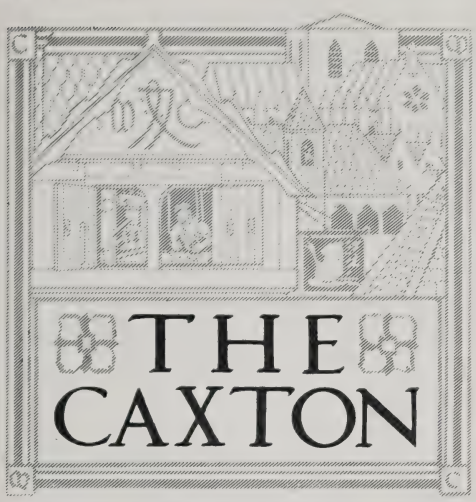
With the aid of greatly enlarged photographs he showed the construction of the paper used in the printing of the majority of the books of today, and showed how the deteriorating of the quality of paper had increased the difficulties of the work of the binder. He described how an entirely new method of oversewing had had to be adopted. But the net result of investigation and experiment had been to enable the work to be done economically and efficiently.

He had also something to say about the skins used for binding, and by the aid of charts showed the amazing differences between the wearing qualities of much of the leather which had been used and the leather made from niger skins, which had been so widely adopted.

The audience was particularly interested in his explanation of his use of transparent vellum, by means of which valuable books could be covered and protected, and have all their original beauty of tooling and lettering seen. There was no mystery about the matter. He laughingly told the story of his own curiosity as to how vellum was made transparent, and being told that all vellum was transparent until it was stretched.

A number of questions were asked—most of them technical—and Mr. Chivers most generously gave information which must have been valuable, especially to the younger binders.

The Society of Arts does a great service to industry by arranging such lectures as these.



London, May, 1925

WE have it on the best authority that a movement is on foot whereby the higher craftsmanship of the printing industry may be encouraged. This is a timely idea. We hope it will be embodied in some such form as will be productive of quickened interest both in the historical side of our great craft and in the modern expression of the best ideals.

The splendid article we are privileged to publish in this number appositely enough is the best possible apologia for the proposed society. Its pride in history and its promise for to-day is at once an inspiration and a challenge.

This much may be said: there is now as never before in modern times a great and growing volume of interest in the craft side of our industry. Neither the struggle for business existence nor the hundred and one things which consume the business man's time will kill this. Research into the history of our craft, experiments and adventures in the best practice of our art are being conducted privately, and the results are for the most part unknown.

No opportunity offers itself for men who love these things conferring together or co-operating. There is a national tendency to look to the Federation of Master Printers to make such opportunities, and year after year the programme of the annual meetings is criticised for the absence of such subjects. We ourselves plead guilty to sympathy with such criticism.

But we are now fully persuaded that the Federation cannot undertake such work. Its hands are already full. The growing demands upon the time of its leaders for purely business matters has about reached its limits. Too much praise could not be given to the men who with generous self-sacrifice devote such enormous time to the labour side of the Federation's work. We are sure the Federation will look with pleasure upon any movement intended to deepen the pride and exalt the prestige of the printing trade, by whomsoever it is carried out.

We hope the new movement, whatever form it takes, will be wide in its outlook, all-embracing in its membership, finding room not only for men who print, but also for men who appreciate and love good printing. It must never be forgotten how much we owe to men who are outside the gate—who have done so much to inspire and suggest. We wish for the new movement every good thing, and confidently look to it for a contribution to the printing trade equal to anything any organisation can ever be expected to do.

I AM more powerful than the combined armies of the world.

I have destroyed more men than all the wars of the world.

I am more deadly than bullets, and I have wrecked more homes than the mightiest of siege guns.

I steal in the United States alone over three hundred million dollars each year.

I spare no one, and find my victims among the rich and poor alike; the young and the old; the strong and the weak; widows and orphans know me.

I loom up to such proportions that I cast my shadows over every field of labour from the turning of the grindstone to the moving of every train.

I massacre thousands upon thousands of wage-earners in a year.

I lurk in unseen places, and do most of my work silently. You are warned against me, but you heed not.

I am relentless. I am everywhere—in the home, on the street, in the factory, at railroad crossings, and on the sea.

I bring sickness, degradation and death, and yet few seek to avoid me.

I destroy, crush or maim; I give nothing, but take all.

I am your worst enemy.

I am Carelessness.—(Placard in the Rock Island Arsenal.)

The "New" Morning Post

THE Morning Post, our oldest London daily paper, has made drastic changes in its journal. Its pages are smaller and the type is altogether new. These changes will not be so apparent to the outsider as to the printer. But from the technical point of view they are very interesting.

The proprietors secured the expert advice of Mr. Joseph Thorpe, who is a well-known student of typography, and served on the committee appointed by the Government to select type faces and modes of display for Government printing, is the author of "Printing for Business," and a member of the Council of the Design and Industries Association.

The purpose of the change is, of course, to present readers with a newspaper at once legible, comely, methodically arranged, and convenient to handle. The meaning embodied in the printing word is sensibly affected by the form of its letters. Although refinement of form cannot improve a sentiment inexpressive or jejune, it does serve to give the full value of good writing.

Mr. Thorpe, in writing of the changes, says:—"My standpoint was that legibility was the first consideration; after that, comeliness so far as it could be attained. It seemed to me that a newspaper for an intelligent body of readers, should be presented in as direct and businesslike and unfussy a manner as possible—a thing to be read with comfort and adapted very definitely for the notoriously deteriorated eyesight of our day. It seemed to me that a newspaper should be fundamentally more legible than any other form of publication if only because it was in fact the most widely read.

"A newspaper's chief difficulty is to find room for the day's news and comments. It has therefore tended to develop along the lines of compression. The type itself has been compressed or 'condensed,' as the technical phrase is, killing with one stone two desirable birds, legibility and beauty of form. The spaces between the lines have been reduced, adding a further factor of eyestrain. Obviously, absolutely perfect conditions are unobtainable owing to considerations of bulk and of expense. It would be better but not feasible to have a more pronounced break between the columns and wider surrounding margins. But your paper would emphatically cost you more.

"Here, as in most mundane affairs, one seeks for the best compromise. Restore the demonstrably more legible old style character in the lower case or small type of the text, and go back to the same type of fount for the capitals to be used in the headlines. It seems to me crystal clear, for instance, that the normal modernised and compressed type of headline commonly used for newspapers is neither as legible or as comely as that used in this new issue for the title and the headlines of The Morning Post—Monotype Plantin for the headlines and Ronaldson old style for the text. Look, for instance, at the attractive 'M,' with its sloping, and the comely rounded 'O,' and the general 'freedom of drawing,' and contrast it with the mechanicalised and rigid forms of the orthodox modern newspaper headline.

"The new types have been used only for what may be called the main news-pages of the paper. It was not possible for technical reasons to extend the improvement to the market columns.

"Imagine the delight of the present writer to find an editor who could understand the following argument: that if compression was necessary, the compression should not be in the type which meant illegibility, but in the brain of the writers which offered a positive advantage. A leader of five hundred words would, other things being equal, I argued, be a better leader than one of six hundred, harder to do, more satisfactory when done; and, because printed in a more legible type, more adequately spaced, easier to read. Oddly enough, this editor wanted his paper read. He really thought it was worth reading.

"I may say that sub-editors were not quite so tractable. It is a sub-editor's job, among many others, to compress 'Plenipotentiaries of Nicaragua negotiate with Stepanopoulos in Constantinople' into two lines of fourteen letters each. They are now given only fourteen letters to the line, and my life is not considered entirely safe in the Department where these fierce competent men are caged."

Mr. Thorpe, in an article describing the transformation, is full of praise for the printing staff:

"The thing could not have been done without supreme clear-headedness and foresight on the part of various executive heads (especially Mr. J. Holmes, the works manager), and of superb goodwill and forbearance on the part of their staffs. The readers of The Morning Post, particularly those of us who are in middle life or beyond, owe particular thanks to Mr. A. Turner, the head of The Morning Post printing staff, for their legible newspaper. This first-rate printer (and man), who, very properly with Scots caution, looked somewhat askance at a presumably ignorant and untechnical outsider (and an Englishman at that), gradually thawed into tolerance which waxed into enthusiastic co-operation in a jolly job of work. The present issue gives the results of a happy compromise arrived at between two points of view. The amateur and professional have embraced, the lion has got down to work with the lamb. What has been achieved has been achieved in the spirit of a desire to import beauty into one of the common things of common life—a daily newspaper."

Long Service

At the Caxton Press Printing Works at Beccles, Suffolk, in the reading department, there are five readers, Messrs. H. Edwards, F. T. Peachey, T. H. Ward, R. Bellingham, and W. Grice, whose combined ages amount to 337 years, and whose service with this particular office totals 248 years, making the average to the credit of each reader over 49½ years. Mr. W. J. Fuller has been presented with an inscribed gold watch by Mr. E. A. Thompson, on behalf of the manager and overseers, on completion of over 51 years' service with the firm. Mr. H. Edwards has 54 years' service, forty-four of which have been spent in the reading department.

The Exhibition

THERE has just been published a 42-paged Bulletin containing the latest information about the Printing Exhibition which is to be opened by H.R.H. Prince Henry on Saturday, May 16, including a very full list of excursions from all parts of the country.

This Bulletin has been well broadcasted, but if any reader has not received a copy, and would like to have one, it will be sent to him on receipt of a postcard by The Organisers, Printing Exhibition, Avenue Chambers, Vernon Place, Southampton Row, W.C.1.

Entries for competitions, together with entrance fees, should be sent to The Organising Managers, Printing Exhibition, Avenue Chambers, 4, Vernon Place, Southampton Row, W.C.1, by May 8th (not May 1st, as announced in Bulletin No. 3).

The specimens must be sent to The Organising Managers, Printing Exhibition, Royal Agricultural Hall, Islington, London, N.1, on May 9th (not before).

The following particulars were not to hand when the Bulletin went to press:—

LANSTON MONOTYPE EXHIBIT.

The Lanston Monotype Corporation, Ltd., will again be one of the largest exhibitors. In addition to showing in full working order their latest models of the popular Monotype composing machine, they are also giving a special demonstration of the Monotype Typecaster, by means of which may be cast display type for case work of a quality equal to that sold by the leading typefounders. This machine also casts leads and rules in strip form, automatically cut as desired. By means of the Monotype composing machine and typecaster, printers are enabled to print always from new type, and the trade is consequently reaching that stage where distribution may be abolished. Such a consummation will be much appreciated in the press-room, where a great saving of time will be effected in make-ready, and the printed product will have a more pleasing and satisfactory appearance.

They will be showing a very interesting collection of automatic machinery, among which will be the Harris Rotary Offset, in quad-demy size, which has a guaranteed speed of 4,000 per hour. The Harris is indisputably the "Rolls-Royce" of the offset world, which enviable reputation has to a large extent been brought about by the capability of the Harris to give better printing and larger output. The automatic feeder on this press is built in the machine, and not attached afterwards; this feature has contributed considerably to the success of the Harris.

The well-known Miller products will be on view, including the latest model of the Miller High-Speed Automatic Cylinder Press, which is claimed to be the fastest cylinder press of its kind on the market, running as it does at a speed of 4,000 per hour to accurate register. It is extremely accessible and simple to operate, and will handle all classes of work. This machine, in fact, embodies all that the word "automatic" means, giving increased output together with the very highest quality. The Miller "Craftsman" Unit, a platen designed for heavy work, will be shown, and also the Miller Universal Saw Trimmer, without which no stereo department can be called complete, for it will perform all the foundry operations except the casting of plates.

In addition to the foregoing machines, the Boston Wire Stitcher will be in evidence. This machine is now very widely known, chiefly on account of its single-adjustment feature; just a single turn of the hand-wheel at the back of the machine automatically effects all the necessary adjustments. There is no spoiled work; the first staple driven in is as perfect as the last.

THE "WINKLER" FLAT PLATE MILLING MACHINE.

This machine is equally suitable for finishing type-high and plate-high work with the greatest degree of accuracy. It combines the functions of two different appliances—the roughing machine and the shaving machine—because it mills the plate, in one operation, down to the desired height, thereby saving labour, time and power. Plates milled on the Winkler are true to less than a thousandth of an inch throughout. The strong and accurate construction, simplicity of operation and absence of complicated contrivances have made this machine deservedly popular in stereo foundries, and wherever installed it ensures high efficiency and great economy in both the finishing room and the press room. While the bed travels backward and forward the milling cutter has a rotary and suitably rapid reciprocating motion, thus ensuring a perfectly true and smooth cut. The special features of this machine counteract the tendency of the plate to spring when milled "head-on" opposite those spots where open spaces appear on the face of the plate. The plate is placed on the bed so that the cutter mills over those unsupported "whites" in a transversal direction and with comparatively little pressure. The result is a perfectly true flat surface. The milling cutter is covered with a safety guard, which, at the same time, serves as a collecting receptacle for the shavings. The bed of the machine is operated by a worm-gear. Provision is made to start or stop the mechanical drive at any point, and a hand wheel at the front of the machine enables the operator to move the bed at will when the mechanical drive is thrown out of operation. The bed movement is speedy, steady and precise. It is automatically reversed when the bed arrives at the end of its track, and automatically stopped when it has returned to its starting position. The table is provided with adjustable clamps for type-high and pica-high plates. The height of the table is adjusted by means of a hand wheel and micrometer gauge. The machine is supplied complete with direct-geared 1-h.p. motor, mounted on strong brackets at the rear of the machine.

MAKE READY.

Make-ready is known to be a sop thrown to appease the devil of inaccuracy—a means of compensating for deficiencies in printing surfaces and printing machines. Although make-ready cannot be entirely done away with under present conditions, the time spent on it can undoubtedly be considerably reduced by using metal-mounted printing plates uniform in height and perfect in depth and by applying experience and judgment to the work. The latest standard hourly rates of the Federation of Master Printers indicate that the time spent on make-ready ranges from one to 22

hours for sheets from demy-folio 4-pp. up to quad-demy 16-pp. When these numbers of hours are multiplied by the amount of the operator's hourly wage, and then multiplied by the number of jobs done per year, some idea will be obtained of the colossal sum of the annual make-ready bill. Would it not be much more economical to invest money in a Winkler milling machine and to put presses in condition than to keep spending it every week of the year in excessive make-ready time?

The progressive printer is slowly but surely removing the frailties of guesswork which tradition has handed down from times when type, paper, and machines were much less accurate than they are to-day. One of the most important steps in this direction is the elimination, as far as possible, of wood mounts for blocks. Actual tests, made with precision instruments, show that wood-mounted " cuts " sink from .003 to .015 under impression, which is equivalent to two thicknesses of heavy manilla. The soft metal mount has undoubtedly proved to give consistently the best results. The stereo, copper, zinc, or electrotype plates can be attached to the solid metal bases either by sprigging or sweating-on. For newspaper work the method usually followed is to pin the plates on to the stereo metal bases, and it is an established fact that the accuracy and uniformity in height of the bases planed on a Winkler go a long way towards ensuring perfect pictorial stereo results.

The impression still prevails among some pressmen that under no condition should halftones, be it stereos, electros or originals, exceed the height of type, which is .918 in. This is a mistaken idea, and in support of this statement we quote from a well-known authority: " It is well known that some plates can and should be worked higher than type, while others should be less than .918 in., the standard height. For instance, a large solid plate requires more impression than type and small open halftones, and to get this extra impression it is necessary to apply it both under the plate and in the packing, so that the plate will ink properly and the cylinder will not be over-packed. Many pressmen ignore this fact and have troubles which are blamed on the printing machines. Yet it is an accepted fact that the larger the solid printing area of a plate the more impression it requires to print it, and, quite obviously, excessive make-ready or packing is necessary, which changes the periphery of the cylinder, unless we divide this between underlaying and overlaying—part under the plate and part on the cylinder."

Formes containing halftones to be printed on an exceptionally good grade of coated paper—a highly-finished stock—require less impression than those which are to be printed on an inferior grade of paper. The foregoing shows how important it is to use plates of uniform and correct height. All the users of the Winkler Milling Machine unite in their testimony that such accuracy and uniformity in the height of plates can best be obtained by the use of this machine. The Winkler has undoubtedly proved to be an investment, not an expense. It is perfectly simple to operate and simply perfect in results.

Specifications: Maximum size of plate handled, $17\frac{3}{4}$ in. by $23\frac{5}{8}$ in.; h.p. of motor, $1\text{-}1\frac{1}{2}$; motor speed required (revs. per minute), 1,200 to 1,500; floor space required, 43 in. by 60 in.; approx. net weight, 1,490 lbs.; approx. gross weight, 1,910 lbs.; approx. cubic contents of cases, 70 cb. ft. Code words for ordering: Complete with 1-h.p. motor and starter, Plano; milling cutter only, Fresa.

FRY'S METAL FOUNDRY.

Fry's are exhibiting at Stand No. 2, Row C, just inside the Main Hall, and the same position as at the last exhibition. Their Printing Metal Service has two main features—supplying metal of unassailable quality; assisting the printer to retain that quality and to secure the best results from it.

The means by which " Fryotype " quality is attained and the highly scientific methods which are used will be illustrated in their exhibit. A series of specimens and photo-micrographs will interest all who desire to know *why* particular alloys are most suitable for certain jobs—why, for instance, Linotype metal will not cast a good stereo plate, and why a small trace of an impurity, perhaps less than one-tenth of 1 per cent., will entirely spoil a metal. All users know that these things are so, but the reasons are interesting when illustrated by photographs of great magnification.

The danger to health from dross is rightly receiving the attention of the trade at the present time. This Exhibition will be an excellent opportunity of seeing Fry's Dross Containers—a most efficient safeguard against lead poisoning, which has already been adopted in many offices.

" Fryotype " Melting Pots and Foundry Equipment will be in operation frequently, demonstrating the most rapid and economical means of ingotting type and slugs and methods of cleaning metal.

Consistently good results in stereotyping and from composing machines are so largely dependent on correct and uniform casting temperature that the group of pyrometers on the stand will form a particularly interesting feature. The types shown will include one capable of indicating the temperature of any of twelve machines on one dial, and also one registering the temperature of a pot continuously, after the manner of a barometer chart.

Among the exhibits of Spacing Material, Brass Rule, etc., should be seen the example of a pica plate mounted on quotations—an accurate, rigid mount, incapable of warping. These special mounting quotations can be built up to almost any size, and can, of course, be used over and over again.

One other outstanding exhibit—a forme of Monotype matter cast from standard " Fryotype " metal, which has stood up to a run of 550,000. That is believed to be a record, and is a fine tribute to the high quality of Fry's metal.

NUMBERING MACHINES.

Messrs. W. Lethaby & Co. will show some mechanical numbering and dating machines, small and large, simple or more complex, which are in daily use, not merely in printeries and binderies, but in the general commercial office the world over. They range from the ordinary dating stamp to the numberer with its extraordinary variations and wide scope on to the Post Office and bank machines. These are chiefly hand-worked, but others are treadle-operated, and yet others run on flat-bed and rotary machines. Their variety and scope are indeed very considerable. British machines have rapidly grown in favour, and made under improved conditions as they are to-day, with all the advantages of precision machinery, evolved from long experience, the British numbering machine possesses a standard of its own which asks no favours from any other. Clock-like in the fine and accurate

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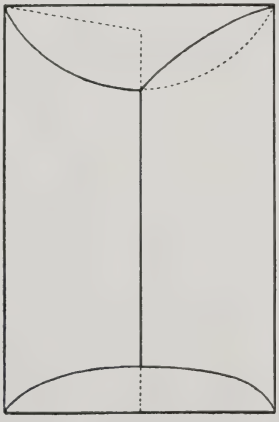

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fitting of teeth, slides, ratchets and pawl swings, the little machines must be scientifically made first to produce what is demanded from them, and next to give anything like the wear and tear which is equally necessary.

The chief classes of machine made include the "Leda"—a proprietary name associated with Lethabys—made in various styles known by numbers. There are other sizes and styles of these hand- or machine-operated numbering machines, but that mentioned is typical.

In another direction, that of the type-high numbering machine, to be locked up in forme and operated on a printing machine, equal success is obtained. Provided with a forward or backward movement, the low plunger—about one-sixteenth inch—is appreciated by users on account of this, as also the clear definite action and the ready response to a touch. The Leda No. 25 low plunger has made machine numbering quite a simple matter to-day. Of recent years modern business methods are largely dependent on numerical systems for their success, and frequently this calls for a numbering machine with special features.

JOBBING GUILDS.

Secretaries of Jobbing Guilds throughout the country are asked to communicate with Mr. H. B. Naylor, secretary of the L.S.C. Guild, at 8, Aubert Park, Highbury, London, N.4, as to arrangements for the re-union at the Exhibition on May 30.

Intending competitors are asked particularly to note that the date for sending in entries for the Guild Competitions is extended to May 8. Further, it should be noted there is no restriction in the note-heading competition to the use of one colour only.

London Master Printers' Dinner

THIS delightful function—one of the few great events of the London printers' year—took place at the Connaught Rooms on Monday, April 27, under the presidency of Mr. Alfred Langley. There was a brilliant company present, including: The Rt. Hon. Lord Riddell, Sir Ernest Wild, K.C. (Recorder of London), Mrs. A. Langley, Brig.-General W. Wright Bemrose, Mr. and Mrs. R. A. Austen-Leigh, Major and Mrs. Clowes, Lt.-Col. and Mrs. Truscott, Mr. W. B. Wykes (President, Federation of Master Printers), Mr. and Mrs. E. C. Austen-Leigh, Lt.-Col. B. L. Hooper, Mr. G. Harrison, Mr. J. D. Wise, Mr. Le Pine Strange (Eastbourne), Mr. H. H. Potts (St. Leonard's), Mr. H. Harrison, Mr. F. W. Bridges, Major W. I. Burch, Mr. and Mrs. J. R. Burt, Mr. W. Catesby, J.P., Mr. F. T. Corkett, Mr. C. Crabtree, Mr. J. Crowlesmith, J.P., Mr. W. R. Cummins, Mr. and Mrs. J. Fry, Mr. and Mrs. A. E. Goodwin, Mr. and Mrs. T. J. S. Guilford, Mr. and Mrs. Bain Irvine, Mr. and Mrs. C. T. Jacobi, Mr. J. Emlyn Jones, Mr. D. G. Milne, Mr. W. J. Mizen, Mr. and Mrs. G. P. Reveirs, Mr. and Mrs. H. A. Reveirs, Mr. H. W. Searle, Mr. and Mrs. R. B. Simnett, Mr. and Mrs. G. F. Tomkin, Mr. W. Whyte (secretary, L.M.P.A.), Mr. A. Williamson, etc.

In proposing the toast of "The London Alliance," coupled with the name of Mr. Alfred Langley, Mr. Wykes (President of the Federation) said that during the recent years the London Alliance had given to the Federation and to the craft a number of very well-known and eminent gentlemen, not only eminent in their own trade, but in the civic life of London. The Association went back a good many years. He was not sure whether Caxton was the first president or the first secretary of the London Society of Compositors; but if they argued that point, they would have Mr. Cahusac getting up and claiming him as one of the members of the P.T.A. The volume of print turned out from London still enabled that city to claim to be the largest centre of printing in the world, and they were also still able to maintain the high quality of the bulk of the work still done, and still able to maintain their position not only as far as provincial competition was concerned, but also with foreign competition. In proof of that statement he would refer them to the exhibition opened a few days ago at the London School of Printing. All the same, it was rather disquieting that, in spite of all the advance in machinery and costing methods, they found it difficult even at this time to keep their works going at full capacity. The London Alliance contained a quarter of the membership of the Federation. It was obvious from that that the Federation was very dependent on the help and assistance of London in the running of the Federation activities. Next year the London Alliance would provide the Federation with its president, Mr. W. Howard Hazell—(applause)—who was absent taking a short holiday in preparation for the task in front of him. During their year of office Mr. Langley and he had decided that neither of them could claim to be merchant princes. Probably they were two of the youngest and two of the smallest printers who had ever held their respective offices, and it had been their desire to do their level best during their year of office to cement the good feeling and relationships and closer working between the Federation and the London Alliance. Two things during the past year had helped in this direction. One was being housed under one roof, and the other was the launching of the collective advertising scheme. The London Alliance had been quite enthusiastic, and certainly gave considerable assistance in forming and launching the scheme. He believed they would look back on the collective advertising scheme, as on the costing scheme, as one of the greatest benefits in the printing trade. The recent labour troubles certainly had the one beneficial effect of uniting London and the Provinces in endeavouring to maintain law and order in their industry. The settlement, whilst being a striking testimony to the Joint Industrial Council, had enabled them to settle their own dispute by themselves without outside help. He would like to pay tribute to the London members on the Labour Committee, particularly the London Labour Chairman, Major Clowes—(applause)—whose untiring work and assistance were of very great value indeed on that occasion. They also owed thanks to the patience and help of Mr. George Isaacs and Mr. Holmes, as well as their other trade union friends, who equally strove to the utmost to preserve order and restore peace. Referring to Mr. Alfred Langley, he spoke of the friendly relationship between them during the past

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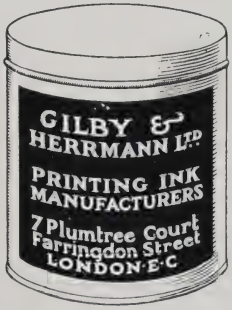

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year. He held a very high opinion of Mr. Langley's ability, sincerity, and the exceedingly kind and friendly way he had always met, not only themselves, but the Federation officials.

Mr. Alfred Langley, President of the London Master Printers' Association, responding, said how deep was his appreciation of the way in which the London Association had endeavoured during the past year to be a source of strength to the Federation. They had worked in perfect harmony with the Federation. He would also like to express his thanks to all the members of the Federation and the various Alliances for the support they had given to London during the past year. The recent dispute in the industry might have been disastrous, but, thanks to both sides, who never lost their faith in the Joint Industrial Council, they were able to demonstrate to the whole industrial world that the printing trade could settle its own disputes by the combined wisdom of those who sat on both sides of the table. That was something the printing trade could be proud of. Amongst all those who had rendered help during the crisis he mentioned Colonel Fletcher, General Bemrose, and Major Clowes, and the demonstration of solidarity given by the London representatives of the periodical houses, which solidarity was so striking as to draw congratulations and appreciations even from the labour side. He would like to thank Mr. Wykes for his kind reference to the London Alliance, and would urge all its members that, should another occasion arise when they had to present a solid front, he hoped they would all line up as they did in the last crisis.

Lord Riddell gave the toast of "The Ladies and the Visitors" in his own style, slyly suggesting that the singling out of Sir Ernest Wild for special mention was a precautionary measure now that the Alliance had removed its offices to Old Bailey. He welcomed the task of assuring the ladies present, many of whom had lately been receiving their husbands home in the small hours of the morning, that this Association was not a myth. It really existed. He created a great laugh by referring to himself as the George Washington of the printing trade. After he had been entertainingly romancing for some time,

Sir Ernest Wild, in replying to the toast, held up Lord Riddell as a great object lesson to young journalists in the manufacture of "copy." The speaker had something to say on the question of the administration of justice and newspaper publicity. He was all on the side of publicity. With all its dangers, the one thing necessary was that the press should be at liberty to report law court proceedings. There was a close connection between the administration of justice and the liberty of the press—both had to do with the elucidation of facts—some of which facts were often much stranger than fiction. The geni of the printing press was the greatest power for good or for evil in the world. Sir Ernest spoke of the difference between the spoken and the printed word, and said it was greatly to the credit of those connected with the printing press that they used their tremendous power for worthy and not for ignoble ends. They acted and re-acted upon public opinion, and one thing was certain—it would never do for the legislature to tamper with the printing press. The press must be its own censor. They had had a pleasant evening set out in bold type, happily spaced, and punctuated to perfection.

Lieut.-Col. Truscott, in proposing the health of Mr. Langley, mentioned two or three salient features of his year of office. Mr. Langley had shown amazing discretion and tact when presiding at the many and various meetings. He had been a sedative to the excitable and a stimulant to the comatose. He had done admirable work during the recent negotiations, and it was very considerably due to his activities that the solidarity of London was maintained, as he kept every member conversant with what was going on, so that they all felt they knew the exact stage of the proceedings and what work had been accomplished as a result of the negotiations. He would be voicing the opinion of the Association if he said that the benefit of his work would be felt for many years to come, and he wished to thank him for the time, trouble, and unfailing industry he had given on their behalf. There was no doubt they also owed a great deal to Mr. Whyte and his staff.

The toast was heartily drunk with musical honours.

Mr. Langley, in responding to the toast, said he was extremely grateful to Col. Truscott for his kind remarks, and especially the reference to his wife. He had had a very pleasant year of office, and many kindnesses shown him by the members of the Alliance, both large and small printers. He desired to thank all the officers of the district associations for the way they had carried on the work of local associations and helped them so much at headquarters, putting in a tremendous amount of work voluntarily. He feared they received very little support owing to the apathy that existed amongst printers in outlying districts. But he hoped they were not discouraged, for they were really carrying on good work. He also wished to add a word of praise for the officers and staff at the Old Bailey for the assistance given, and again thank Major Clowes for help given during the whole year in labour negotiations, all the members of the Council, and he also wished to thank them for the way they had received the toast.

The speeches were interspersed by musical items rendered by talented artistes.

The London School of Printing and Kindred Trades

Mr. W. Howard Hazell, J.P., and Mr. T. E. Naylor, J.P., M.P., have again been re-elected Chairman and Vice-Chairman respectively at the London School of Printing, and Mr. W. R. Codling, C.V.O., C.B.E., H.M. Stationery Office; Mr. Ewan S. Agnew, Messrs. Bradbury Agnew; Mr. H. Murch, Daily News; Capt. J. E. Fraser, The Amalgamted Press, Ltd.; and Mr. E. A. Hobbs, Daily Express, have been nominated on the governing body.

Obituary

A great figure in the printing world has departed in Mr. J. A. Brown, of Douglas, I.O.M. He had been identified with the life of the Island for 60 years, and had been closely identified with the development of the Isle of Man as a holiday resort. He was the oldest Freemason in the Island, and his face was familiar in every Manx Lodge. He was a man of kindly nature and greatly beloved.

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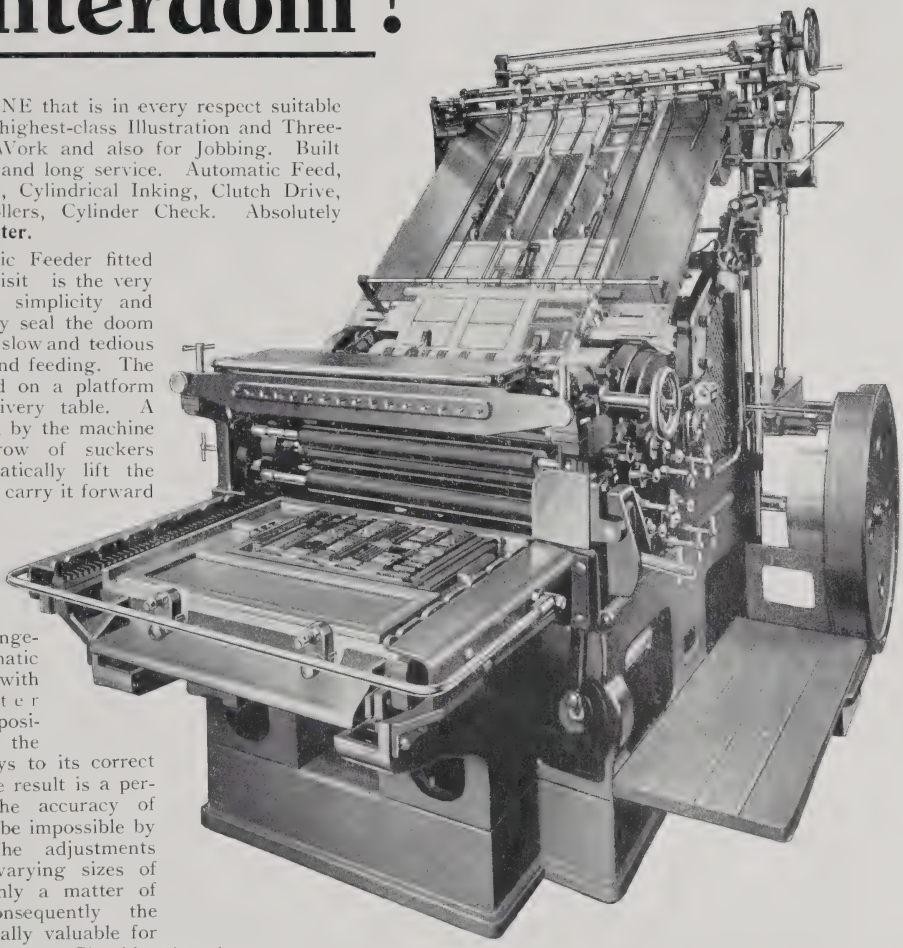

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Modern Methods of Making up Type Pages

By ROBERT F. SALADE

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WITHIN recent years remarkable improvements have been made over the ordinary methods of making up pages of type matter, so that to-day this branch of work may be regarded as one of the most important in the printing industry having to do with the production of fine typography. This is said in view of the fact that, no matter how carefully text may be composed for a book, magazine or trade journal, unless the type matter is correctly made up in the form of pages, the completed printing will not present the right appearance.

While it is true that modern methods of making up type pages are being generally followed throughout the printing and publishing world, and that beautiful book pages are being made possible by these methods, yet we are sorry to say that the majority of books, magazines, booklets, house organs and other kinds of publications now being circulated are not produced according to best standards of make-up. The various defects in the make-up of these publications are due to various causes, including incompetence (or lack of training) on the part of the men who make-up the pages of type. The main reason for these defects, however, is the *lack of system* in the offices where they occur. With the proper system in force in any composing-room, the finest kind of make-up can be produced, even in offices where ordinary "plain-matter" compositors are employed to do the make-up.

In the make-up departments of the larger book and magazine publishing plants, however, expert make-up men are employed who have been specially trained in all the fine details of this work. These men follow a system of make-up which has been perfected by masters of the art of typography, and practically all of the technical information in this article is based upon that system. Our technical points will concern both solid pages of text matter and pages of reading matter incorporating illustrations.

First of all we shall consider the important question of accuracy as applied to the make-up of book pages, magazine pages, etc. In the case of magazine pages, for example, every page for the one magazine, whatever its name may be, should be made up to one standard size, but this cannot be done to extreme accuracy by the ordinary system of determining the length of a page with a printers' line gauge. The scientific way to determine the length of a magazine page is to count the number of points in the running head, leads, slugs and type lines which are to form a full page. This is a comparatively simple proposition, after the standard length of page has been adopted for a magazine. For example, a page of solid text matter for one well-known magazine always contains 106 lines of 8-point, set solid, a 12-point running head, and 16 points of space between the heading and the top of the reading matter. Altogether, there is a total of 876 points to a page, including the running head and the space between the head and text.

MAKING UP TO POINTS.

The make-up men who work on this magazine never use a line gauge or measuring gauge of any kind to determine the length of a page, but instead they always make up a page so that it will contain exactly 876 points. These points are, of course, based on the American point system as applied to type. The same length is standard for both solid pages of text matter and for pages of reading matter incorporating display titles, halftone illustrations, legends under illustrations, etc. This means that when the made-up pages are locked up for electrotyping, each and every page is precisely the same length, and that after the electrotypes have been made each and every plate will be the same standard size, which in turn means that when the pages of the magazine are printed and "backed up" the register of them is close to perfection.

SPONGY FORMES.

Now if this system was not followed in the plant referred to, and if instead the length of the pages was decided by the use of a line gauge, the entire series of pages for an issue of the magazine would not all be the same length. Some pages would be longer than others; some would be shorter than others. Why? Because with the use of a line gauge it would be impossible to have precisely the same amount of spacing material in all the pages, as some would include display headings, illustrations, etc., and these would "squeeze up" to smaller size when locked up than pages of solid text matter. In these times machine composition is used for practically every magazine, at least for the text matter pages, and it is a well-known fact among printers that machine composition is "spongy" to such an extent that it will draw closer together under tight lock-up. A solid page of machine composition—say a magazine page 9 in. by 12 in.—may squeeze up as to its length, under lock-up, from one-eighth to one-half of an inch. A solid page of 8-point type will contract to a greater extent under lock-up than a solid page of 10-point matter.

The system of counting the number of points in a page of matter is particularly adapted to magazine work where accuracy is desired, and where the pages of text matter incorporate display headings, sub-heads, illustrations and legends for the illustrations. No matter what the style of a page may be, the system of counting points will provide for its standard length. Some of the larger magazines have various reading pages set in 10-point and other reading pages set in 8-point; the editorial page may be set in 11-point, and certain other pages may consist of pictorial plates with a few lines of type. All of these variations in the make-up of the page are "automatically" taken care of by the system of counting points. The men employed in a large make-up department where this system is in force soon become so familiar with it that they can tell at a glance the amount of spacing, number of lines and other things necessary for each page.

IMPOSITION.

When this same system is applied to the regular run of book-work, catalogue pages, booklets, pamphlets and house magazine, it not only saves time in the make-up department, but it saves time in the work of imposition, as with a series of pages

all exactly the same length a forme can be quickly imposed with a smaller number of pieces of furniture than would be required for a forme of irregular size pages. Take for example a booklet job of 32 pages: The head of the make-up department learns, after having studied this job and making the essential measurements, that each page should contain a certain number of lines of type, running head, and folio number at the foot. The men are then given the job to make up according to their foreman's instructions. A type line gauge is not used at all. Each man simply counts the number of type lines which are to make a full page, and he places exactly the same space between heading and text, and text and folio in every page made up. The other men who are working on the same job are all following the same instructions, and the entire job is thus completed in a surprisingly short space of time.

A MAKE-UP MAN.

The method of having one highly-trained man in charge of make-up work has been adopted in many printing and publishing establishments with the utmost success. By this plan practically every important job of make-up, including catalogues, house organs, booklets and regular book work, is first given to the man in charge of such work, who thoroughly studies all the details of the job before giving out any of the copy to the force of men. It is this leader's duty to see that there is plenty of material ready to proceed with the job (leads, slugs, rules, metal furniture, etc.) before starting the men at work. It is also his duty to see that the galleys of type matter and printing plates for the job are ready for continuous work. In some instances of a very intricate job of make-up, like tabular work, for example, the head of the department supplies his men with the rules, slugs, special figures, accents, etc., essential for the pages, and by this system the men do not have to interrupt their work to look for such material.

In the well-directed composing-room where plain-matter composition is produced on machines, this matter is systematically arranged on galleys so that the make-up men can locate it and handle it to the greatest advantage. In the case of a large catalogue job to have running heads, sub-heads, legends for illustrations, folios at the foot of pages, and special tables of figures, each class of matter is placed on separate galleys. The running heads will be found all together on one galley; the sub-heads will be found, in consecutive order, on another galley; the tables of figures have been placed, in the proper order, on still other galleys; while all the other sections of special composition have been similarly arranged. When the force of make-up men begin work on this job, practically everything is ready for them. They will not find it necessary to set up by hand such lines as running heads, sub-heads, legends, etc. Moreover, all of the machine composition standing on galleys for the job has been read and corrected before the make-up work is commenced. All that the make-up men have to do is to put the various sections of type matter together in the proper page form, but this work must be done carefully, and a great deal of spacing may be necessary in pages which contain illustrations, legends, and so forth.

LABOUR-SAVING HELPS.

The rightly-equipped make-up department of a large printing plant has a certain number of "alleys" which are fitted out particularly for rapid make-up work. Each one of these alleys contains a large supply and assortment of leads and slugs cut to labour-saving sizes; metal furniture; brass rule in several different faces and in labour-saving founts; quad and space cases; and special sorts cases to provide for corrections in type matter. Naturally, an alley of this character must be furnished especially for the class of make-up work to be produced in it. An alley designed for the make-up of railroad tariff forms would have to be outfitted somewhat differently than an alley intended for the make-up of magazine pages.

MAGAZINE PAGES.

We shall now return to the subject of making up pages of text matter for a high-grade magazine. This is among the most important make-up work now being done for the reason that the circulations of larger national magazines run into millions of copies per issue, and that the make-up of these publications has been planned to please the "eye" of the great mass of people from the artistic standpoint. The make-up of the most popular magazines is under the direction of artists who prepare layout sheets for each page of reading matter, the layout sheets being sketched and pasted up with proofs of text, halftone plates, decorative initial letters, display headings, etc., the exact positions for all these features being plainly marked.

UGLY MISTAKES.

Now here is a familiar example of faulty make-up which occasionally is seen at the top of a column of plain matter in some third-class magazine:

great satisfaction from these purchases.
That people do appreciate service of this type is

The last line of a paragraph from the foot of one column of matter appearing at the head of the next column is always objectionable in the make-up of a magazine page. Nor should the last line of a paragraph ever appear at the head of a book page, catalogue page or any other style of page. When a fault of this character occurs, the make-up man should try to bring at least one more line forward and place it above the short line like this:

do them the most good and in helping them get the
greatest satisfaction from these purchases.
That people do appreciate service of this type is

In a case where the make-up man finds it impossible to bring forward the additional line like the above example, he should consult the proof-reader so that some editorial change in the copy matter may be made to bring about the desired improvement. When the page is set in monotype matter it is a comparatively simple task for the make-up man to over-run and re-space a few lines in the first column to make it one line longer.

A PERFECT EXAMPLE.

When the composition consists of solid lines (or slugs), it would be necessary to have a few lines re-set on the machine. In any event the improvement should be made, as nothing is more unsightly on a printed page than a short line of text appearing at the head of a column. So particular on this point are several large publishers that they insist upon having at least *two* full lines of type above a short line at the head of a column, like this specimen:

them wonderfully in making the purchases that will
do them the most good and in helping them get
the greatest satisfaction from these purchases.
That people do appreciate service of this type is

The above may be regarded as a perfect example of make-up at the head of a book page or at the head of a column of matter on a magazine page. Some magazines have three, four, five or more columns on a page, and where perfect make up is desired the last line of a paragraph must not appear at the head of any of these columns. To accomplish this good work it may often be essential to manipulate the type-matter to no little extent; in some instances it may even be necessary to have a few words added to certain parts of the text to make a column a line or more langer; in fact, the practice of adding (or omitting) a few words in a page of matter for the purpose of improving the appearance of its make-up is being followed in many of the high-class publishing plants.

FAULTY PAGE ENDINGS.

Another very familiar example of poor make-up to be seen in the majority of magazines, trade journals, books, house organs, booklets and catalogues, is the following, which appears at the foot of a page:

tion by adopting the policy of the business to keep the customers he already has.

This example is in regard to any case where the story, or article, does not end on the page where the last short line occurs. Now, to look at the above specimen, the reader is apt to believe that the subject has come to an end, and there is nothing to indicate the fact that the subject is continued on the next page. This fault may be found in even some of the leading magazines and trade journals, and no doubt many articles in those periodicals have not been completely read by careless persons who took it for granted that the subject had been ended on the page in the manner suggested by the appearance of the make-up. There is no possibility of readers making such a mistake when the make-up is done like this:

tion by adopting the policy of the business to keep the customers he already has.
It is a great deal easier to keep what we have

The last line of the above example plainly tells the reader that the subject is continued on the following page. Now, while this style of make-up is not essential to ordinary book-work, yet it is always good to break the matter at the foot of a page like the above example, because the printed page looks the better for it.

ILLUSTRATIONS.

When making up text matter pages for a magazine which are to include illustrations, the matter should be so arranged as to form a solid "frame," or border, around each illustration, according to the position of each illustration. Of course, if an illustration is placed at one corner of a page of text, the matter is to form a border only at two sides of the picture. But, if an illustration is to be placed in the centre of a page of text, the matter is to form a border on all sides of the plate. To carry out this plan well in the case of a page make-up of three or four columns, the lines of type in each column over and under the plate should be so separated in the make-up as not to form short lines at the border point above or below the illustration. For example, two breaks at the end of columns above an illustration like the following would not look well:

get into touch with him to know why.

was for some reason unable to go.

WHITE SPACE.

No doubt the reader of this article will understand that a certain amount of white space is to be arranged in the make-up of a page between the edges of an illustration and the border formed by the type-matter. As a general rule, this white space should be about 20 points wide. When the text matter is set in 10-point the white space can easily be formed by setting a double row of 10-point quads between the matter and plate.

The style of many of the large magazines calls for a plain rule border placed around certain of the halftone plates in text-matter pages. This may be of "hair-line" rule, ½-point face rule, 1-point face rule, or even as "black" as 2-point face rule, according to the style of the page. In some instances the rule border is placed within about 12 points to the edges of the plate; in other cases white space of about 20 points is left between rule border and plate, while additional white space of the same proportion is left between the rule border and text-matter "frame." Many of the straight-line halftone plates used in magazine pages, however, are made with a heavy rule border around them, so that a separate rule border would be unnecessary for such illustrations.

LAY-OUT SHEETS.

In the larger magazine publishing plants the make-up work has been anticipated by layout sheets to such an extent that the make-up men do not find it necessary to over-run and re-set matter for the average page. In the first place, these lay-out sheets have been sent to the machine composition department carefully marked as to the various measures of text-matter to be placed at the sides of illustrations, display headings, decorative pieces, etc. The new-style layout sheets even provide for the most intricate class of "run-around" composition to be set on the machine. By the term "run-around" we mean composition set so that it will conform at certain places to the forms of oval illustrations, round halftone plates or odd-shaped illustrations of any style.

OVER-RUNNING.

Speaking now of a plant where this system of layout sheets is in use, when the make-up men receive the galleys of type matter, they usually find that matter already set to the different measures essential for each page. It is only fair to state, however, that in the case of an intricate page of text it may be necessary for the make-up man working on it to over-run and re-set some of the matter to produce a perfect page. Monotype composition, because of its flexibility, is much utilised for this class of work, especially magazine pages calling for "run-around" composition and narrow-measure composition at the sides of illustrations.

Even in the case where the most accurate kind of layout sheet for an illustrated page of text has been sent to the machine operators, when the make-up man receives the matter for that page, very likely he will have to over-run and re-space some parts of the matter in order to follow the laws of high-class make-up. Wonderful things are being accomplished by composing machines, but at the same time the machines have their limitations. This means that where the finest make-up is desired in illustrated magazine pages some manipulation of the machine composition will always be necessary.

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RAPID MONOTYPE WORK.

In the make-up department where monotype matter is handled for magazine pages the work of over-running the machine composition is done in a rapid and systematic way. The alley in which this work is handled is well equipped for the purpose, the equipment including special cases for monotype sorts and spaces (the spaces in these cases being the regular 3-em, 4-em, 5-em, " hair " space, en-quad and em-quad). The experienced man can over-run and re-space a column of text in a short space of time. The letter-spacing in narrow-measure composition is done with either " hair " spaces or thin cardboard spaces, according to the closeness of the letter-spacing desired. Each make-up man has a small case, divided up into small compartments, and containing a supply of the cardboard spaces cut to 6-point, 7-point, 8-point, and all the way up to 18-point sizes. These cardboard spaces are very useful in the work of making up magazine pages.

The halftone illustrations used in pages of the national magazines are mounted on solid lead base, and are accurately trimmed to size, or odd shape, before being sent to the make-up department.

The Good Samaritans of the Printing Trade

THE annual dinner of the Printers' Medical Aid and Sanatoria Association is always a delightful function. There is a gratifying satisfaction in being made to feel sharers in well-doing. The work of the Society grows year by year, and Mr. Vandy, the enthusiastic chairman of committee, with the indefatiguable secretary, Mr. Arthur O'Connor, and their devoted colleagues in this work find inspiration in added work.

During the past year the number of letters has been far in advance of the accomplishments of any similar organisation, etiher in or outside the printing industry. The principal item was the issue of 10,015 pairs of spectacles; 3,611 surgical appliances were issued, a record of which the Association is proud; 2,816 special hospital letters was another much appreciated effort, whilst a most popular benefit was the sending away of 285 convalescent home cases to the sixteen establishments upon our list, which includes both seaside and inland institutions; 73 sanatoria cases were also arranged for; 163 massage and electrical cases were sent to the exceedingly able masseurs associated with the P.M.A.,; while 55 specialist appointments were arranged for. This is one year's work, and it is a work in which all associated with the P.M.A. take a pardonable pride. The issue of 17,018 letters represents a regular issue of some 330 per week, and shows a total issue since the inception of the Association of 133,516.

The Rt. Hon. C. W. Bowerman, M.P., President of the Society, was in the chair at the dinner held on April 23, and in proposing the toast of " Continued Prosperity to the Society," spoke of the heartiness with which the work was done and the happy progress of the Society from its inception. Going through the activities of the Association, he thought it wonderful that such an amount of work could be carried through. The Chairman of Committee had great extension of work in view. A great feature of this work was that there was no charity about it, and with the exception of their small office staff their work was quite voluntary. That was one of the characteristics of the printing trade. They owed much to " Arthur " and William Vandy. Slyly enough Mr. Bowerman added: " Arthur does the talking and Vandy does the thinking."

Mr. O'Connor, in reply, rejoiced they were still making progress. They had overcome lots of difficulties, and had all sorts of imitators to meet. But they still pushed along. Their's was the only association of the kind which really gave out what they preferred to give out to their 46,000 members, leaving out of account the trade unions.

Mr. William Vandy also responded, and in a fervid speech greatly encouraged his colleagues by his own enthusiasm and satisfaction. He praised the members of the committee, who were devoted to the work. He had it in mind that they might advance still further by making and providing many of their own surgical appliances. He also thought they should have an illuminated night sign over their office in Fleet Street—one of the most wonderful places in that wonderful street. They stood by their voluntary principle. There were no limits to possible extensions of their work. It could not be cribbed, cabined or confined. " Forward, upward and onward " was their motto.

Mr. A. E. Holmes, in proposing the toast of " Kindred Associations,s" was very happy in a resumé of the philanthropic work done by the Pensions Corporation, Natsope, and the Paper Workers' Unions and the Convalescent Homes. Their own work in no way conflicted with other work. There was no other industry which catered for their workers as their own.

Mr. T. G. Newland, J.P., in responding, gave an interesting account of the new premises his own union had recently acquired at Filey, in Yorkshire, which was to be used as a holiday home. It was a beautiful house, and when ready would have accommodation for 45 visitors. He had little doubt that the place would be always full.

Mr. H. Wilson Howes, in proposing " The Press," graciously acknowledged the generous way in which all the philanthropic institutions of their trade were treated by their papers. He paid a generous tribute to Mr. F. W. Bridges, the proprietor of this Journal, who was ever ready to do everything he could to advance the interests of the worker. He congratulated the present Editor of THE CAXTON MAGAZINE on the phenomenal improvements he had wrought in that Journal, and the high and judicious tone with which he had pervaded its pages.

Mr. A. E. Owen-Jones, in responding, was quite sure that all their Journals were far too much interested in the wonderful work they did, and was proud to be associated with it, ever to neglect their interest in their Journals. He congratulated the Society on their share of the work, which lifted the printing industry to a pre-eminence and glory on its philanthropic side which was both the envy and despair of the industrial world.

Machine Gravure

By R. B. FISHENDEN, M.Sc. (Tech.)*

(*Continued from page 207*)

PHOTOGRAVURE MACHINES.

PHOTOGRAVURE machines may be divided into several classes: simple web rotaries, flat-bed machines, sheet-fed rotaries, offset-gravure machines, and newspaper or periodical printing machines.

The rotary intaglio printing machine in its basic form is of remarkably simple construction. Such a machine consists of an engraved cylinder supported horizontally upon its mandril, which is driven by suitable gearing. Underneath the engraved cylinder a roller is arranged covered with gelatine composition, or velvet, or other fabric. This roller is in contact with the engraved cylinder, and revolves in a trough of suitable fluid printing ink. As the engraved cylinder is rotated, a film of ink is applied uniformly to the surface and the cavities. The surface of the engraved cylinder is cleaned by a steel knife edge or "doctor" disposed parallel to and about level with its axis; the excess of ink drops from the back of the doctor into the ink trough. The pressure of the doctor upon the engraved surface is adjusted in some convenient way. In order to avoid uneven wear, and to remove any solid impurities in the ink which might scratch the copper surface, mechanical devices are provided to cause the "doctor" knife to traverse laterally, parallel with the engraved surface.

Above the engraved cylinder is a pressure bowl, or impression cylinder, covered with a coating of partially vulcanised rubber. The web of paper to be printed is brought between the two, and sufficient pressure applied to secure a solid impression. The pressure bowl revolves by friction contact, and is not driven. A machine of this simple construction is capable of producing prints of the highest quality, and if of sufficient strength may, under suitable conditions, be run with satisfactory results at a speed of 10,000 an hour. With a normal quick-drying ink the printed reel may be passed almost immediately through the slitter and delivered as sheets, or it may be re-reeled to be dealt with later.

The wear on the copper cylinder due to the doctor is extremely small, and is much less than in calico or wallpaper printing, because the doctors that are used in the newer processes are much thinner: the normal thickness is from 9/1000ths in. to 12/1000ths in., whilst in some cases the steel is only 5/1000ths in. in thickness. The tempering of the steel is of importance, as well as the setting or grinding of its edge. The steel doctor is suitably supported on the machine with a heavier steel backing-up piece behind it, which allows $\frac{1}{4}$ in. to $\frac{1}{2}$ in. of the thinner steel to project at the wiping edge and retain its flexibility.

An improvement in web rotary machines has been effected by the introduction of an intermediate pressure bowl. In this case the ordinary pressure bowl has an iron surface. Between it and the engraved cylinder is disposed another small cylinder of the necessary length covered with partially vulcanised rubber; the effect of this device is to obtain a narrower pressure line in printing, thereby enabling the necessary printing pressure to be obtained with reduced total load, thus reducing the mechanical strain on the frame of the machine.

Although the web rotary machine is perfectly satisfactory in the results it produces, an expensive stock of paper of varying widths, qualities and weights must be maintained, and to avoid waste the circumference of the cylinders must bear the correct relationship to the size of the required sheet.

FLAT-BED MACHINES.

The speed of machines of this type is restricted to about 500 impressions per hour. Such machines are of the ordinary stop-cylinder wharfedale or litho type, with a suitably arranged inking device and "doctor" wipe mechanism. There appears to be few advantages in this type of machine for gravure printing, except for small runs; although excellent colour work is done in this way, the machine consumes a large quantity of ink, and it has been found difficult to maintain a clean wipe.

The Waite flat-bed gravure machine is similar in construction to the Waite die-press; the printing plate is inverted, so that the arrangement of ink, furnishing roller and doctor knife usual in rotary machines can be adopted; the objections to the ordinary flat-bed type of machine are in this way avoided. The machine operates at a speed of 1,000-1,200 impressions per hour; two sizes are made, 15 in. by 10 in. and 10 in. by 6 in. Other suggestions have been made for a flat-bed machine designed in such a way that the engraved plate is supported in an inverted position with the furnishing roller, doctor knife, and impression cylinder travelling underneath it. Another suggestion was to adapt a letterpress heavy art platen for photogravure printing.

SHEET-FED ROTARIES.

Sheet-fed rotary machines have been introduced to meet single-colour commercial requirements and also for colour printing. Owing to the considerable variations in the quality, thickness and sizes of paper, it is impracticable to meet the wide range of commercial requirements on machines of the web pattern. A number of sheet-fed rotary machines are now available, and some general observations on their design may be made.

Sheet-fed machines are usually fitted with expanding mandrils to hold the engraved cylinder in printing position. With few exceptions the impression cylinder is fitted with grippers to carry the sheets through the impression and deliver them, allowing sufficient time for the ink to dry before reaching the delivery table. Some machines are fitted with blowers or heaters to hasten the drying. Occasionally a cold air blast is caused to impinge upon the cylinder between wiping by the doctor and the impression, to counteract the tendency of some varieties of printing ink to leave a slight scum on the surface of the cylinder. This device is also used occasionally to increase the brilliance of the finished prints by accentuating the high-lights; this use of the air blast imparts to the prints excessive brilliance, but it robs them of the soft delicacy in the lighter tones usually admired in photogravure. With few exceptions, sheet-fed gravure machines are designed in such a way that the impression cylinder is twice the diameter of the engraved one; the latter makes two revolutions for every impression, and is automatically "tripped" when the impression is not being made. This

*Lecture delivered at Stationers Hall, London, March 4, 1925

principle of construction either halves the output of the machine or doubles the wear on the etched surface. It would appear that machine designers might give some consideration to the design of machines on some principle which would avoid the unnecessary wear. The speeds of sheet-fed rotary machines range from 1,500 to 3,000 impressions per hour.

One of the first sheet-fed rotary machines to be built in this country was designed and constructed by Messrs. Taylor, Garnett & Evans, of Reddish, Stockport, but it is not on the market. Messrs. Penrose & Co., Ltd., have designed and manufactured a number of sheet-fed rotary machines to print sheets ranging from 39 in. by 33 in. to 20 in. by 15 in. Messrs. Pickup & Knowles, of Pendleton, Manchester, have constructed a sheet-fed machine without grippers. The impression cylinder is arranged above the engraved cylinder, the latter dropping out of position every second revolution. The sheet is fed between two cylinders to a front lay that is in advance of the nip, and the engraved cylinder rises and grips the sheet and takes it through the impression. This principle has recently been applied by this firm to a small machine taking sheets 12 in. by 18 in., designed to accommodate thin etched copper plates stretched round a suitable iron cylinder in place of the usual copper cylinder. The space between the edges of the copper sheet is bridged by a filling-in piece. Arrangements are made to protect the doctor knife when passing over this portion of the cylinder, and the impression cylinder is cut away in a corresponding position. This machine is designed for the use of small printers, and it is suggested that the photogravure plates will be ordered and purchased by the printer in the same way as halftone blocks.

Among the first of the Continental machines that were introduced in this country was that manufactured by Kempe. This was of simple construction, having two cylinders of equal diameter. The grippers were carried on bars supported on chains, and the gripper bars fell into a slot cut in the impression cylinder; the grippers carried the sheet from the laying-on board through the impression to the delivery table. It was found that this type of construction did not permit of satisfactory register being maintained. This firm has now introduced a machine of the usual 1 to 2 ratio between the two cylinders.

A more elaborate machine is that manufactured by Albert, the "Palatia." This machine is designed to meet every requirement of high-grade work. The engraved cylinder is fitted with the blower, already referred to, and an extra slip sheeting cylinder with its accompanying feed-board is provided, in order that the slip sheet may be carried round with the printed sheet to the delivery table. This device, however, is only necessary in the case of exceedingly slow-drying inks.

A machine introduced more recently in this country is the Johannesburg, which is used both in single- and in multi-colour printing; several sizes are made, ranging from 47 in. by 35 in. to 20 in. by 15 in.

One of the most recent additions to sheet-fed rotaries is the Marinoni-Voirin; the only size made at present is 30 in. by 22 in. Details of this machine are not yet available, but it embodies several original features in design. Among these, the most important appears to be a device whereby the pinion on the engraved cylinder is not continuously driven, as is usual in sheet-fed rotary machines; during the period of the impression the positive drive does not operate, and the cylinder revolves by pressure contact. This innovation should improve the register, and also remove the need to vary the thickness of the packing on the impression cylinder to allow for variations in the size of the engraved one.

OFFSET GRAVURE MACHINES.

There would appear to be little advantage in applying the offset principle to intaglio printing; but although the full strength of the intaglio impression may be lost in the process, possibilities are opened up for an entirely new range of printing styles.

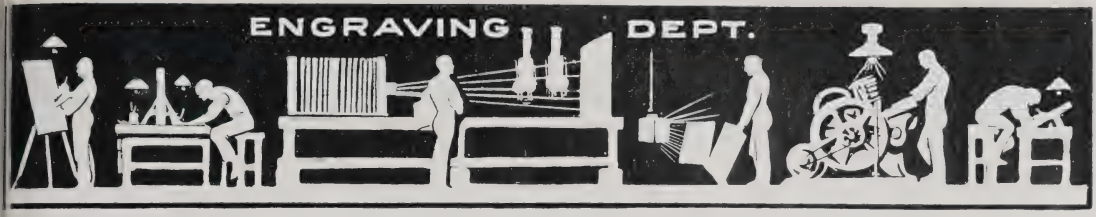
Every printing process has its peculiarities, and offset gravure, although similar in some respects to litho offset, will have its own individual characteristics. In spite of the great progress that has been made in litho-offset, gravure offset would have an advantage over litho-offset in that the printing surface cannot deteriorate, whereas in dealing with an ink image on a litho plate there is always an attendant risk. Offset gravure has also been employed on suitable machines for printing on rigid materials, such as glass or metal.

The Renaissance process introduced into this country some years ago by Linotype & Machinery, Ltd., was an offset-gravure process, the printing being done from thin copper plates. In this machine the doctor was substituted by a composition roller revolving in contact with the engraved surface and travelling in the opposite direction. The excess of colour was wiped from the engraved surface by this roller, and this in its turn was cleaned by passing through a bath of solvent. Experimental prints were taken on this machine in monochrome and in colour by Mr. G. W. Jones, who obtained some highly successful results, and it is to be regretted that the process was not further developed.

Messrs. Penrose have been at work for some time on the problem of offset-gravure, and Mr. Owen has designed and built an entirely original machine that has a number of interesting features. The copper cylinders are replaced by thin copper plates 1/50 in. in thickness. After etching, these plates are curved on a special bending machine to fit the printing cylinder, and are then gripped in position on the cylindrical base provided; a filling-in piece is fitted to bridge the gap. The size of the machine is 30 in. by 20 in., and it is designed as a perfector; a pair of engraved and offset cylinders being arranged in a horizontal plane, the two offset cylinders being in the centre; the web of paper to be printed is passed between the two, and is thus printed on both sides at one operation. The printing of the web is intermittent, the paper remaining stationary whilst the portion of the offset cylinder corresponding to the bridge-piece in the engraved cylinder passes it; the web then moves forward again to the next impression. The feeding mechanism moves the web forward continuously, and a specially designed looping device absorbs the spare paper from the reel during the stoppage of the web previously referred to. The web after printing travels forward to the cutting device, and the prints are delivered in sheets. Speeds from 5,000 to 8,000 per hour have already been obtained. The composition of the ink necessary for the process has not yet been finally settled, but the results that have already been accomplished are of undoubted interest.

(To be concluded.)

Dalziel's SIX Departments



ONE AT
19-25 EARL STREET, FINSBURY, E.C.2.

PHOTO ENGRAVINGS

THREE COLOUR PROCESS
FOUR COLOUR PROCESS
HALF TONE BLOCKS
LINE ENGRAVINGS
ARTISTS' WORK

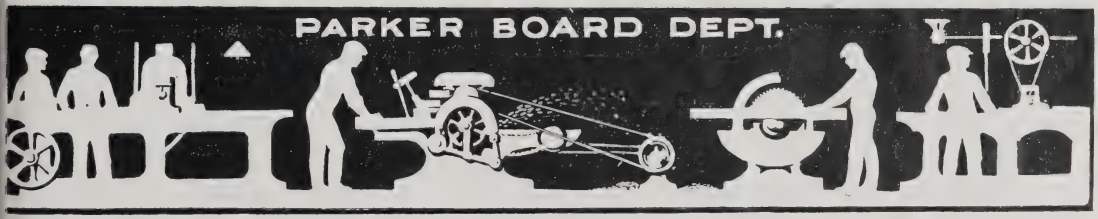
ONE AT
2a PLOUGH COURT, FETTER LANE, E.C.4.
ONE AT
19-25 EARL STREET, FINSBURY, E.C.2, and
ONE AT
5-7 MARSH STREET, ANCOATS, MANCHESTER.

DALZIEL STEREOS

COLOUR PLATES
ROTARY PLATES
BOOK PLATES
JOBBING PLATES

THE 6TH

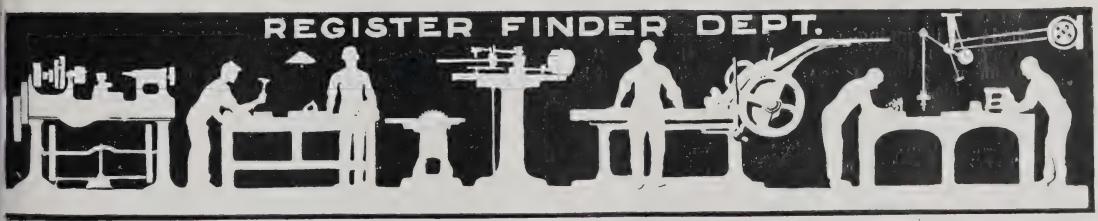
See opposite page.



ONE AT
19-25 EARL STREET, FINSBURY, E.C. 2.

PARKER PATENT MOUNTING BOARDS

FOOLSCAP 8vo TO QUAD ROYAL
FOR ORIGINAL PLATES
FOR DALZIEL STEREOS
FOR COMMON STEREOS
FOR ELECTROTYPES



ONE AT
19-25 EARL STREET, FINSBURY, E.C.2.

DALZIEL PATENT REGISTER FINDER

BY MEANS OF THIS INVENTION WE ARE ABLE TO SUPPLY OUR ORIGINAL COLOUR PLATES, OR DALZIEL STEREOS TAKEN FROM THEM, MOUNTED IN GOOD REGISTER ON PARKER BOARDS BEFORE GOING TO PRESS

125th Anniversary of Messrs. Straker's, Ltd.

TO commemorate the 125th anniversary of the establishment of the business and the 100th anniversary of its removal from the country to London, Messrs. Straker Bros., Ltd., printers, entertained about 310 of their employes to dinner on April 17 at the Abercorn Rooms, Great Eastern Hotel. Mr. Edgar C. Straker, chairman of the company, presided, supported by Mr. Hartley F. Straker, Mr. Howard Straker, Mr. John Kynoch, Mr. F. Bassil, Mr. Malcolm Straker, Mr. Graham Straker, Mr. T. E.

Naylor, M.P., Mr. W. Chisholm (proprietor of Mining World), Mr. A. E. Goodwin (secretary of the Federation of Master Printers), Mr. W. Whyte (secretary, London Alliance Master Printers), Mr. Wilson Howes, Mr. A. O. Bullock, etc.

This well-known printing business, established for the past hundred years in the City of London, had its beginning in the little Essex town of Coggeshall in 1800. William Buck was the founder. About the year 1825 William Buck moved his business to London, setting up his press at 61, Fenchurch Street, assisted by his sons William (aged 18) and Thomas (then about 16). By 1831, however, William Buck had retired from the business, and his son William had joined a publishing firm, the business being run in the name of Thomas Buck. In 1832 Thomas removed to 4, Cullum Street, the Ipswich Arms Yard, and in 1836 took into the business his brother Cornelius Bateman (Peter), William Buck's fourth son, then aged 23. When, in the following year, Thomas took in his brother Charles, the third son, then aged 25, Cornelius left the firm, as he considered three were too many, and joined Mr. Hansard, the printer of the Parliamentary debates. He later founded the firm of Cornelius Buck & Son, which printed and published the Debates for nfty years or more, until the contract was lost to the Hansard Union. Thomas and Charles continued in partnership until 1845, when Thomas retired, his share being taken up by Frederic Straker, who had married Miriam, William Buck's daughter. Frederic Straker, born 1812, son of Wm. Straker, bookbinder, had served his apprenticeship (March 7, 1826-1833) to Charles Adlard, citizen and stationer of London, and was admitted a freeman of the City of London, April 5, 1853. The firm continued as Buck & Straker until Charles Buck's death in 1857, after which it was continued by Frederick Straker alone; but it had been removed to 8, Billiter Street, E.C., in 1850. Frederick Straker died November 26, 1867, leaving the business to his widow, in the management of which she was assisted by her sons, Frederic William and Edgar Charles. The business was removed in 1869 to 35, Camomile Street, E.C., and the two sons were taken into partnership in 1872. Miriam Straker retired in 1881, and died February 14, 1892.

In 1895 Edgar Charles Straker became sole proprietor, and carried on the business in Bishopsgate. In 1898 the business was registered as a private limited liability company, the first directors being Edgar Charles Straker, Hartley Frederic Straker (son of the late F. W. Straker), and Arthur Robert Wilson, the former manager. On the death of A. R. Wilson in 1920, three new directors were elected, viz., Stanley Straker (second son of the late Frederic William Straker), Frederick James Bassil, and John Kynoch.

A description of the plant and machinery used in the business during the period under review might well furnish a history of printing appliances and their improvement from the almost rudimentary hand-presses of the past to the fast and well-nigh perfect power machines used to-day.

During the existence of the business one department after another has been added, until to-day the company's productions cover every branch of the printing and bookbinding trades. In addition, practically all the type is produced on the premises, while the engineering staff carries out running repairs to plant and machinery.

Many interesting tales are told of various old employes, prominent amongst whom stand William Dicks, who, first employed as a boy in 1844, was still actively engaged in the company's employ at the time of his death in 1914, and Charles Francis, the well-known New York printer, who left the

firm in 1871. Fred Diver, now in a large way of business in Toronto, worked for the firm about the same time as Charles Francis, both being still alive.

The works are now, from the point of view of arrangement, lighting, ventilation, etc., second to none in the City of London, while every effort possible is made by the directors to look after the health, comfort and welfare of their employes.

At the commemoration dinner, Mr. Charles Barnett, the head of the composing department, in proposing the toast of the company, said when he joined the business in 1879 there were only ten machines in the machine-room; in the composing-room there were only 30 men and boys, and in the warehouse they had only two hand-cutting machines and four men. The present proud position of the firm had been reached by the uprightness and integrity with which the business had always been conducted. Speaking of Mr. Edgar Straker as an ideal employer of labour, the audience was roused to great enthusiasm, and the toast was drunk with much heartiness.

The Chairman, in responding, was much moved by the appreciation shown of his work, and said he could never help a growing affection for those associated with him in business, however lowly their positions. He rejoiced in a better spirit prevailing in industry—a spirit of mutual consideration. Having reviewed the history of the firm, he went on to say that during the sixty-two years he had been in the business they had never had more than two or three days' work in hand at any time, and yet had never been at a standstill.

Mr. Hartley F. Straker, managing director of the firm, proposed "The Visitors." He, too, was in reminiscent mood, and gave some amusing particulars of Coggleshall, where the business was founded. He told one story of there being two windmills situated on a hill of the town, and the inhabitants, thinking there was not enough wind for both, demolished one of them. Straker's had always been known as an "open house," but they had always paid standard wages or more. They never objected to their men joining unions, and as a matter of fact they were now practically a union house. The speaker gloried in the good understanding which existed between them all. They had found that the interests of the employers and the employed were mutual. He also rejoiced in the work of the Joint Industrial Council, which was a sort of lighthouse to all other trades of the country.

This toast was responded to by Mr. W. Chisholm, proprietor of The Mining World, who had travelled from Penzance to be present. He paid very high tribute to the excellence of the work done by Strakers, and to the consideration given to their customers, particularly to the many technical and trade journals, for whose staffs every thoughtful consideration was given.

Mr. T. E. Naylor, M.P., also responded, and said his valuation of printing houses was based largely on the number of visits he had as a trade union official to pay them. He had never on a single occasion had to approach Straker Bros. on any matter affecting conditions of employment. There could not be a better testimonial than that.

This was a most interesting occasion, and he was delighted to be present.

An excellent programme of music was performed during dinner by Corelli Windratt's Band, and after dinner some first-class artistes entertained the company.

We understand that the old-established and well-known showcard mounting firm, Messrs. Joshua Jones & Co., Ltd., of 17, Little Trinity Lane, E.C.4, and Camberwell, S.E., have acquired the business of Messrs. F. W. Whitehead, of McLean's Buildings, Fetter Lane, E.C.4. In order to cope with the increased business, Messrs. Joshua Jones are taking larger premises at 76, Worship Street, Finsbury, E.C.

Costing

An intensive summer term class for the study of costing will be held at the London School of Printing on Wednesday evenings during May and June. It is essential that early application be made for enrolment by all who desire to take up this course, which is specially arranged for those holding executive positions.

QUADS

GREAT Britain is an island. Oh, don't mention it. I just thought you'd like to know. And it really isn't myself you should thank for the information.

IT was Winston Churchill's father, Lord Randolph, who told us. He was twitting his political opponents with what he called their idolatrous worship of their leader. "Great Britain," he said, "is an island," but, though his opponents would assent to that unless their leader contradicted it—should that leader contradict it, then instantly every one of them would declare that Great Britain wasn't an island and never had been an island, and anyone who said it was, was a liar and a slanderer.

LONDON'S an old city. Well, I thought you'd like to know. London's old; so is Edinburgh; so York; so Norwich; so Bath. So are *not* Middlesborough and Southend, and a few like places. The old cities and towns are ordinarily so congested that a mid-London factory is apt to be an unsatisfactory.

I HAVE known a large works—not a printing works, but one connected with the craft—so congested that sometimes one large important machine had actually to be stopped when another large expensive and expansive machine next to it was working; and several machines could not be worked fully and freely because of their crowded, cribbed, cabined, confined installation.

WE'VE all known, too, cases where machines or other equipment had to be put in not ideally the best place for them, but possibly in almost the worst place; worst in relationship to companioning operations; or, say, in regard to lighting, or vibration.

WE'VE known, too, the case of a one-time useful old machine, whose present slow operation it was mistakenly thought had better not be absolutely dispensed with, and yet whose slowness set a standard to which workers on faster machines tended to conform. There being "a lot of human natur' in mankind," it would have been better to have put out those "bad example" machines, simply because a bad example is expensive.

THESE considerations may in general apply to other factories rather more than to printing works. Yet to some extent they are applicable to those, too.

I RECALL a printer, ordinarily pretty shrewd and successful, who bought a second-hand machine, a double-crown or double-demy I think it was, and installed it in the centre of his machine-room on dearly-rented premises within a quarter of a mile of the Mansion House in London. They never could coax it into doing one single job. Yet he couldn't bring himself to turn it out.

IT'S because facts like these come before me that I'm very glad to see that the costing conference at Buxton is to be asked to discuss works organisation in relation to cost reduction. Of course, works organisation comprehends many more things than plant installation. It includes selecting the right men and women, and avoiding human misfits in appointments, or recognising human misfits when they occur; it deals with general conditions of working, good lighting in particular; it avoids waste steps and all unproductive labour that can be avoided; it aims particularly at assisting in specialisation; though specialising is, to be sure, a subject for the directors or partners, and is a problem of sales management rather than of works organisation. Incentive by profit-sharing or bonus is also bound up with organisation. Of course, the whole question of piece or "'stab" connects with it.

APROPOS of incentive, congratulations to Mr. Basil Cahusac and his fellow profit-sharers in the Solicitors' Law Stationery Society on last year's outworking. That specialising house has vindicated its general conduct and its works organisation by continued prosperous business. After taking over a London business or two, it purchased the old stationery business of David Robertson & Co., Ltd., in "the second city in the Empire," and this Glasgow addition has already made a profit contribution, in spite of heavy preliminary expenses.

ALTOGETHER Mr. Cahusac has just had the satisfaction of reporting an increase of dividend from 17 to 18 per cent. That means that each member of the staff who has completed a certain (I believe quite short) term of service has received this year a bonus of 12 per cent. on his or her total remuneration for the year, or about six weeks' money.

"MEANS to be adopted to secure better estimating" is another subject for the Buxton conference. It is a riddle. One answer to it is—another Riddell, the John Robertson of that ilk. But what are we to do while his young blades are growing at the London Printing School? What is to be done in small places, and in places not small but far from London? Something we must do; the price of business success, like the price of liberty, is eternal vigilance. And a man quoting an unreasonably low figure may do an amount of harm to the craft out of all proportion to any good he can possibly do to himself. No doubt he as a rule injures himself also.

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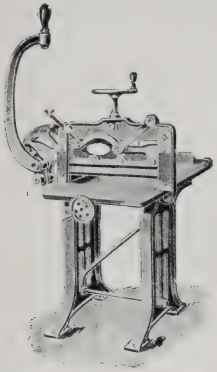
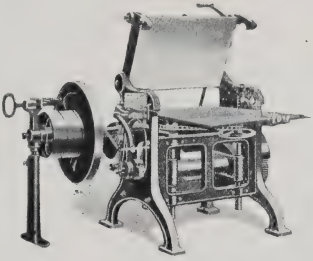


Hand Lever Guillotines.

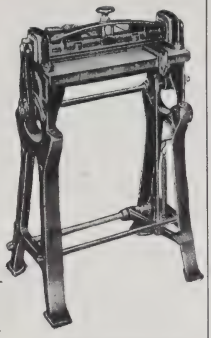
Manufacturers of

MACHINES and KNIVES for PRINTERS, BOXMAKERS, BOOKBINDERS, ENVELOPE and BAG MAKERS, etc.



Punching Machines.

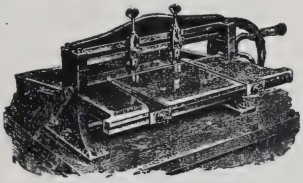
GUILLOTINE and OTHER KNIVES MADE and GROUND, CUTTERS FOR ENVELOPES and SHOWCARDS, SMALL OR LARGE SIZES, etc.



Bending Machines.

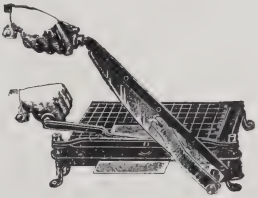
KEEN

PRICES

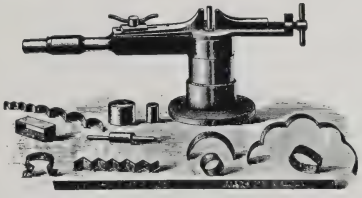


Scoring Machines, Hand, Treadle or Power.

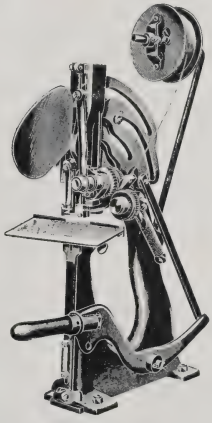
Cutters for Envelopes & Showcards.



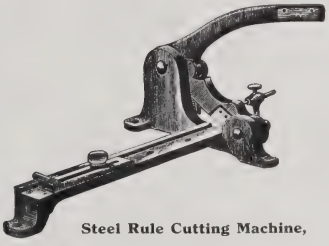
Cardboard Cutters, all sizes.



Rule Benders, for Steel or Brass Rule.

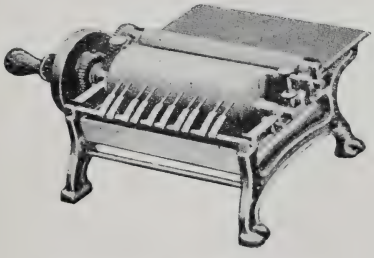


Stitching Machines, for Hand, Treadle or Power.



Steel Rule Cutting Machine,

for Brass and Steel Rule, etc. Will cut up to 4 & 6 point with ease.



Whole Surface Gumming Machines.

A FEW OF THE MODELS ON VIEW at our SHOWROOMS

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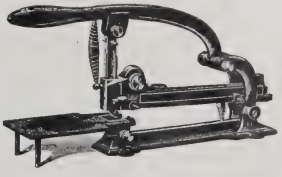

Pamphlet Stitcher, stitches up to ¾-in. thick.

CALL AND INSPECT.

KEEN PRICES.

Please say you saw the Advertisement in THE CAXTON MAGAZINE.

Every printer newly starting should set up a reserve fund from his very first day. Those who have been trading without one should begin one at once. Not to-morrow—but to-day. It matters little how small is the starting nucleus. The tragedy of many a life is not in what it failed to carry to completion; the tragedy is in what it failed to carry to a beginning. One main thing is to keep vividly before one's mind that one must save money; that one is not in business for any less object.

"Don't be poor," said old Johnson to spendthrift young Boswell; and he bade him reflect (knowing the fine native powers of that Bohemian, despite all his careless habits) that, even if he wished well to the community and could give it good advice, people in general would not weigh words, albeit never so wise, which came from one who manifestly had not been wise in his own affairs.

Right estimating and right pricing will be promoted chiefly by better knowledge; but a definite purpose, steadily kept in view, and a conscious exercise of will power are also needful, and no conference and no mere craft mastery can supply these. Nor will a sensitive man want to be continually butting in with advice. One hesitancy may be due to this, that he really feels great respect on many grounds for someone who yet he considers is foolish or is ignorant, or is both, in regard to estimating and pricing.

The one thing a friend may permit himself to do, and surely may without any resentment be permitted to do, is to conjure the one he thinks mistaken or weak-willed, to keep a definite and a worthy business aim, the aim of independence, always in view. A desire for money—

"Not for to hide it in a hedge
Nor for a train attendant,
But for the glorious privilege
Of being independent."

So wrote Robbie Burns, who wrote it, we are sure, with absolute sincerity. He left no debts.

"Think on these things." The desirable thing at which you look steadily, you sooner or later determine to attain, or at least approach as nearly as you can.

Just as I am writing there comes before me a signed article which twenty-two years ago (1903) I published, calling it "The Printers' Golden Chance." I fancy that some bits from it may be refreshing, even amusing, at this day. It opens:

"The persistent work which has been done through months and years is telling now. Printerdom is aroused. From John O'Groat's House to Land's End we hear the same report. In the provinces, Southport and Halifax are conspicuous by the lead they are now giving to provincial printers everywhere, and I think it is not too much to say that the names of Ashton in Southport, and Mortimer in Halifax, names long conspicuous in Printerdom, are prominently associated with the new and more hopeful condition of things. In Southport report has it that printers are even in some cases assisting each other, or offering to do so, in order to make it easier for each to fulfil in letter and in spirit his part of the engagement. . ."

"The position at the moment is exceedingly interesting. I attended a while ago a most significant conference between deputed representatives of the Printers' Managers' and Overseers' Association and members of the Master Printers' Association. The delegation included Mr. R. J. Davies, who for years past has presided with so much ability and tact over the committees and public deliberations of the Managers' Association, and whose house, Messrs. W. P. Griffiths & Sons, Ltd., of Prujean Square, Old Bailey, has perhaps done more than any other house in London (with the possible exception of Messrs. Waterlow & Sons, Ltd.) to obtain close day-by-day records and analyses of costs."

"The Managers' spokesmen also included Mr. W. W. Fox (Messrs. Waterlow & Sons, Winchester Street), protagonist in price cogitation. Mr. Fox is not now contending for a mere unit of 1s. 4d. for the hour's composition. No; he says boldly, that when 'all costs' per hour are reckoned, they must be put at 1s. 9d., and hints at 2s. as a reasonable selling price. Another delegate was Mr. E. C. Moyce, the very able secretary of the Managers' Association, a thoroughly practical, well-informed and respected man; one who will neither tolerate injustice to his firm, nor see the slightest injustice to the men under his charge. Another was Mr. De Wilde, and, most fittingly, seeing that he serves the great house of Spottiswoode & Co., so honourably known to fame for its old traditions and the splendid modernity of its 'fine printing,' whose praise, too, is in all the chapels for the number of long-time servants on its roll. Then there was Mr. Mumford, the thoughtful manager in a house unique throughout the world, that which produces 'Kelly's Directories'; a man who has ventured original and somewhat daring counsels in regard to the vital matter of the training of apprentices; an advocate, too, of one year's probation and five years' subsequent term. Then, too, there was Mr. A. Bennett, a printer of very diversified experience."

"Mr. Fox, with much skill, defended the managers' contention that 1s. 4d. at the very least (he personally thought 1s. 9d.) should be recognised as the hour cost price of composition. Mr. Tull, a director of Messrs. Griffith & Sons, Ltd., helped the conference by stating (in decimals for convenience) the proportion of cost in his own establishment, as ascertained by eighteen months' special records. He virtually agreed with Mr. Fox, but but would put depreciation higher."

"Mr. Hart, the Chairman of the London Master Printers' Association (Clements House, printer of The Financial News, The Drapers' Record, etc.), rather deprecated decimals and minute fractions as needless and time-wasting, and curiously showed that quite independently of the Seeman suggestion, and without ever having heard of the Seeman (American) plan, he had adopted the same method of estimating by percentage, and, further, had concluded his non-productive costs to require 33⅓ per cent. on the productive. 'I have never been able to put it lower than 33⅓,' says Mr. Seeman, which quite amused Mr. Hart, on my bringing this proof of similarity in plan and result to his notice. Major Vane Stowe (secretary of the Master Printers' Federation) most sensibly argued that if a house could save one halfpenny in its cost, it should benefit by that halfpenny. That what was wanted was not an excessive inquisition, but an ascertainment of the *average cost* in London printeries of

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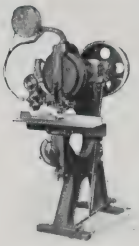

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to stitch up to 2¾-in.

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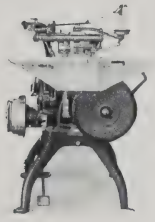

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Thread Stitching, Knotting and Calendar Looping Machine, producing 4 different lengths of stitch.

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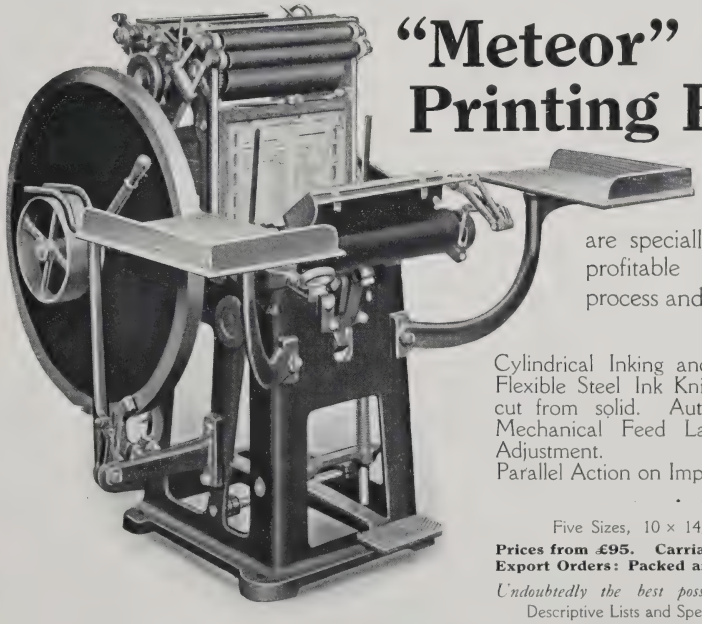
'Phone : Clerkenwe'l 1568.



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Parallel Action on Impression.

. . .

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A.B.C. 5th EDITION

repute. That was the one remark which elicited pronounced assent."

"Mr. Eliot Viney, with characteristic frankness, and almost bluntness, asked how many of them were getting the 1s. 4d. for which they were now with such unanimity contending. Who were the sinners? 'I'm one,' he added, cheerily enough. 'We are all sinners,' assented Mr. W. B. Marr, manager of a large London and provincial house. 'I'm afraid so,' said Mr. Viney. Mr. Herbert Waterlow, again, was as frank as Mr. Viney. He had most carefully looked into things, and he was satisfied that a great many jobs must have been done by his firm at a loss."

"Various speakers urged the vital connection, the vital interpenetration of the apprentice question with this question of cost. 'We must pay our apprentices more,' was one frank avowal, until really there seemed quite a little touch of comic opera in the position. 'We give our apprentices part of their earnings as extra inducement,' Mr. Waterlow explained. Mr. Bennett declared that his firm (Truscott's) are prepared to give rewards to apprentices from time to time, not according to any scale or gauge, but according to their apparent exercise of native intelligence and mother wit."

I AM sorry to make so large a quotation, and yet hardly think I need apologise. Just this further extract:

"'The title of Mr. Fox's original paper, "The Selling Price of Composition," is a little unfortunate,' said Mr. Tull; 'it may be taken that we can afford to sell our composition at 1s. 4d.' Mr. Davies, Mr. Fox, and others expressly repudiated the remotest idea of suggesting to the masters what they ought to charge. 'Our discussion,' said Mr. Fox, 'centred on cost.' So, in that matter, there is no root of difference between Mr. Fox on this side the ocean and Mr. Dando on the other; even though there seemed to be, when a while ago Mr. Dando wrote from Philadelphia urging that Mr. Fox should begin by concerning himself not with price, but with cost."

"We shall soon have a report from the committee of the Masters' Association, which has been considering this whole subject. It can, of course, only recommend: but its recommendations, 'light as air,' may be 'strong as iron.'"

THAT was in March, 1903. The Federation issued various books or pamphlets during the decade which followed, but it was not till 1913 that their remarkable co-operation culminated in the submission of the official costing system. I say co-operation, for, of course, it was that; co-operation of markedly great and very enlightened goodwill. But it should not be forgotten, or it should be told to those who may not know, that not only did Howard Hazell render supremely good service in the limelight by explaining the system and clarifying our minds, but he was a most strenuous worker behind the scenes in the long months during which the system was being slowly, laboriously, ingeniously devised, and perhaps I might say revised and re-revised.

THE Buxton conference is to consider a binding price list. Binding seems to me a subject very little understood, and not always as welcome to the printer as it might be. Why shouldn't the printer be pleased to bind, and his customer be bound to be pleased? Why can't gum and gumption be united in binding?

BINDING certainly is not a simple standard operation. This week I listened at the Society of Arts to that past master, Mr. Chivers, master bookbinder, and to-day the Mayor of Bath. He has bound literally millions of books for libraries, besides whatever he has done for individual customers. He will show you an exquisite mediæval richly coloured binding which time had begun to crumble and which has been preserved for long years to come by transparent vellum being stretched over it. He will prove the high and allways satisfactory serviceableness of Niger leather, though he will lament that the African natives spoil so many skins, at any rate reduce the covering capacity. As he can give highest service, so he can show how, with over-sewing and general right handling, books can be very cheaply bound to open flat and to maintain for years in strength quite equal to the right usage expected. Mr. Chivers should be at Buxton, and tell of some of the impossible things demanded of binders; by men whose main idea of a book seems to be that it shall bulk imposingly however few its pages.

I hope to come back to this topic.

THE conference held in England's highest town may well be the one of highest tone. And this the more, not the less, because of any persisting gloom in the community. It was a man who was faced with the prospect of ruin, the prospect as he put it that the fig tree might not blossom, neither might fruit be in the vine, and the prospect of the flock cut off from the fold and the ox from the stall, that was the man who yet in that same moment said "Thou makest me to walk upon my high places."

I ASK myself, What do I mean by a high tone? It is so easy to use vague words meaning very little and to feel that the mere using of them is something. No doubt words at times are very potent, are half deeds, or, as was said of Luther's words, are half battles; but in any case whole deeds and whole battles are better than their halves, and words, fine sounding words, may not come near to being battles or deeds. What do I mean when I conjure the reader to strive for the high place and the high tone.

WELL, I would have every conference member recall with Tom Paine that no less than the world is his country, that mankind are his brethren. Men in every land are needing each other's service and each other's friendliness; if only to avoid what will be the inevitable and the operative opposite of these—if only to avoid each other's disservice and enmity.

I WOULD have every conference member ask himself if, after all, men may not more need to understand each other better than they may need to reform or to control each other. Indeed who are really wholly qualified to reform the rest? We all have our weaknesses. Sometimes perhaps some of us sigh like Tennyson for some one still strong man in a blatant land. But Tennyson, I think, ended: And oh for that man to arise in me, that the man I am may cease to be. He did not see the perfect autocrat anywhere readymade; and perhaps didn't want to see him; but rather was of Browning's mind, when that more philosophic poet exclaimed: "Make no more giants, God, but elevate the race at once."

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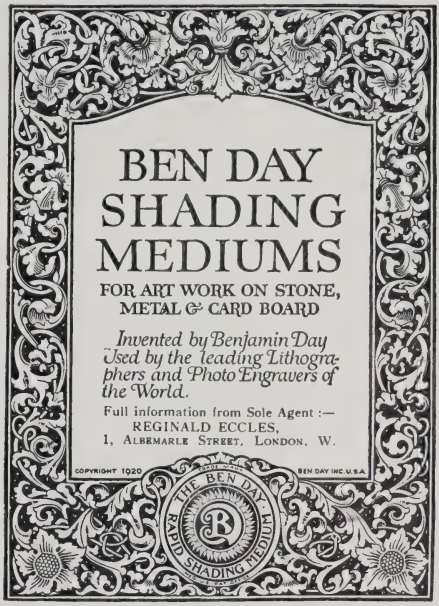

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THE price of better understanding of each other is persistent pains to that end. And persistent patience. Patience, says Asquith (Lord Oxford), is the great need of a statesman. Our printing business demands of us that we shall be statesmen.

THE mere politician says: "What can the people do for me?" The statesman asks himself: "What can I do for the people?" The business man, so far as he is a statesman (and he is not a perfect business man without that statesman attribute) also asks what he can do for the people. Here. Now. Not when he has made a fortune. Here and now is his character as craftsman and employer.

HE can keep always in mind that those who have only their labour to sell, must sell it as dearly as they possibly can.

HE can keep in mind that they may blunder in that effort. They may be selfish and sectional—just like himself. They may be ignorant of the forces of that condition, that limit prices and wages, just like himself. He can labour after ever clearer and clearer grasp in his own mind of what are the real laws, the real facts, that do constitute or impose limits and conditions, and he surely should not be satisfied without attaining not only to such a clear grasp, but also attaining to the means of so presenting them to any disputatious worker as to carry conviction. If men are crying for the moon, the fact that they are doing so should be demonstrable to any ordinarily intelligent mind. But mere statement is not demonstration.

IN the realm of the blind the one-eyed man is king. Marx is not a two-eyed, not a clear thinker or expositor. Many a dissatisfied printing employe believes at first or second or third hand that Marx has wiped out all classical economists, and that all opposition to Marx is stupid or insincere. It might be a good thing for some one of our pioneering and progressive craft of printing who recognises Marx's confusion and error of argument, to present his own critique of Marx, and his own general view of industrial possibilities. And if he is (as I would we all were) an enthusiast for joint council and profit-sharing schemes, why should he not say his say there anent, and pass his commentary upon the causes which have led to failures of such schemes where they have failed.

IT would be well, too, to explain every possibility of assisting our workers to more comfortable life, particularly to more comfortable housing. And it would be well to show far more keenness on technical excellence in our craft.

THE Duke of Wellington talked of one-o'clock-in-the-morning courage.

THE Joint Industrial Council members in the recent paperworkers' and binders' dispute showed five-o'clock-in-the-morning courage. Throughout their fifteen hours' contention they had the manhood to be candid disputants. They tried to realise each other's viewpoint. They tried to see in what they could concur.

NEW air for our craft: "See the Concur-ring Heroes Come." (Copyright in Buxtonia reserved.)

ENOUGH for the month.

FRANK COLEBROOK.

Lord Riddell on Trade Unionism

LORD RIDDELL, proposing the toast of "The Union" at the conference dinner of the National Union of Journalists at Birmingham, said that in one respect Birmingham might claim to be the Union's birthplace. That was most appropriate. Was not Birmingham the home of the screw industry? (Laughter and cheers.) The Union had greatly concerned itself with "screws." Journalists owed a great deal to the Daniels who started and continued this Union. "It is easy to be a Daniel with a bank balance of £25,000, but it takes a lot of courage and grit to be a Daniel with a balance of £5 4s. 1d." (Cheers.) "I am an old trade unionist. I believe trade unionism has done more for the working classes than any other movement this country has ever seen. This Union is a formidable body. I usually meet it on the other side of the table, and I can assure you I have never met a body of men more eloquent, more persuasive, more persistent, and, when occasion requires, more abusive, than the members of your deputations. (Laughter and cheers.) . . . We are living in a commercial age. Great newspapers are being controlled by large groups of capitalists. It is obvious that such companies must have very able staffs if they are to succeed. The probability is that wages are calculated to rise—perhaps not in proportion to capital. Therefore I think you may regard the future with hope—tempered with discretion." (Laughter and cheers.)

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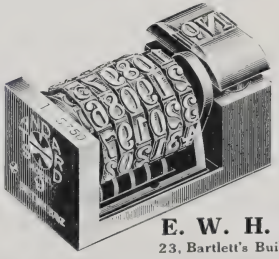

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TRADE NEWS

The Rulex Rotary and Rulex Tandem

A MACHINE that has never before been demonstrated in this country will be running at the showrooms of Messrs. Soldans, Ltd., 44-46, Eagle Street, Holborn, W.C.1, from May 16 onwards. It is the latest triumph of a famous works who are the pioneers of disc ruling machines, and is a combined ruling and printing machine, which will not only print a sheet in its full width, but also to a depth of 17 inches. This is accomplished by means of an up-to-date single-sided disc ruling machine, with all modern adjustments, coupled with a rotary printing machine attachment, which prints twice for every revolution of the ruling cylinder. This machine is called the "Rulex Tandem," and the printing takes place either from ordinary type matter, where only headings and footnotes have to be printed, or from stereo plates, where it is desired to print marginal columns of figures, etc.

The "Rulex Rotary" prints only from stereo plates, and is entirely automatic. As a trade expert remarked in a contemporary after a recent tour of Continental printing works, "The way ruling and printing was being done in one operation was an eye-opener." Messrs. Soldans, Ltd., are affording an opportunity to everyone to see this new departure which is bound to have a great influence on mass production work such as analysis books, shipping lists and manifests, account book work, forms, factory slips, government work, etc., being produced at the moment throughout the United Kingdom.

Dalziel Foundry, Ltd., at Manchester

DALZIEL FOUNDRY, LTD., inform us that printers in Manchester and the surrounding districts are now able to obtain Dalziel stereos without the risk and possible delay in transit by sending formes and blocks to London. As will be seen by our advertisement pages, Dalziel Foundry, Ltd., have opened a fully-equipped foundry at 5/7, Marsh Street, Ancoats, Manchester, where there is every facility for the prompt production and delivery of these well-known printing plates. The firm's representatives will be very pleased to give personal attention to orders for process blocks of all kinds. These are produced at the Photo Engraving Department at 19/25, Earl Street, Finsbury, London, where further extensions have been made in order to cope with the increasing demand for Dalziel process blocks.

At the forthcoming Printers' Exhibition at the Agricultural Hall the exhibit of this firm will not fail to attract attention. Their stand occupies the same prominent position in the Main Hall as in the last exhibition, and here will be shown all classes of Dalziel stereos and process engravings, and a full range of the different stock sizes of Parker Mounting Boards, so well known in the printing trade; also an interesting display showing how Dalziel Register Finder System enables colour plates to be mounted in good register before going to press.

Profit Sharing

A BRIGHT and happy throng, the staff of the Solicitors' Law Stationery Society, Ltd., filled the Library at the Memorial Hall on Tuesday evening, the 7th ult., the occasion being the thirteenth annual meeting. It was presided over by Mr. H. Basil Cahusac, the managing director. The Chairman told his hearers of the events in the life of the society during the past year, the chief event being the opening of a branch at Glasgow by the purchase of the old-established stationery business of David Robertson & Co., Ltd., a law side to which was being steadily developed. This branch, he said, although open for nine months only of the year, had already, in spite of heavy preliminary expenses, made its contribution to the profits of the Society. The story he next unfolded was one of continued success at all branches with but one exception, and that no fault of its own. In giving the figures of the general results, he said the turnover for the year had increased by nearly £32,000, and the net profit by nearly £4,000. The dividend had been increased from 17 per cent. to 18 per cent., and that meant that each one of his hearers who had completed the year's service with the Society would receive a bonus of 12 per cent. upon their total remuneration for the year, or about six weeks' money. Warrants for each one's share would be handed to them on the morrow, the total amount so distributed being some £11,000. He concluded by giving some details of a pension scheme that was being worked out, and reminded his hearers it depended upon the whole of the present staff accepting the scheme to bring it into being. Some questions upon points in the scheme were asked and replied to.

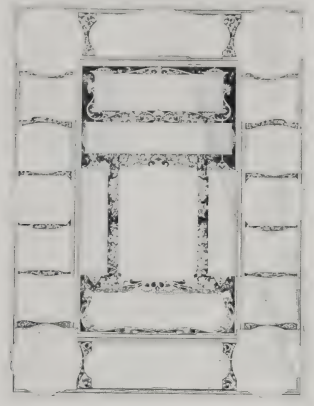
Training of Executives for the Printing Trade

ONCE again the London School of Printing anticipates the needs of the great industry which it represents. Arrangements are now complete whereby scholarships may be instituted to prepare men to fill managerial positions by means of a whole-time training. The scholarships will be open for competition, the conditions being that candidates must be of British nationality and are serving or have served an apprenticeship in some section of the printing industry. It is expected that the trade associations and firms connected with the printing and kindred trades will assist by providing maintenance allowances during the training period.

To the Winterbottom Book Cloth Co., Ltd., is due the credit of instituting the first scholarship to the value of £100 per year. Competition for this scholarship is open to those engaged in the binding trades. Applications for particulars and date of competition should be made to the Principal of the London School of Printing, 61, Stamford Street, S.E.1.

Advertising Fixture Sheets

We have received from Messrs. Taylor Brothers, colour printers, Leeds, a full range of their advertising fixture sheet publications suitable for cricket and sports clubs. Printers will be glad to know where they can obtain really well-printed sheets,



some of them with excellent illustrations of cricket players at the wicket and in the field. In that class of work the biggest expense is this preliminary one, and Taylor Brothers, by providing these illustrated sheets with blanks for local matter, have made a troublesome job easy to many printers, especially as the cost of them is exceedingly reasonable.

Calendar Stereos

We have seen specimens of the 1926 calendar stereos prepared by Messrs. Wells & Co., Needmore Street, Holloway, N.19, and think many printers would like to know of them and see the sheets for themselves. This firm would be quite glad to send them to any enquirers.

Mr. Charles W. Hobson, the well-known publicity expert, has removed his head office from 3, St. James's Square, Manchester, to 41, Bedford Square, London, W.C.1.

Miscellaneous Advertisements

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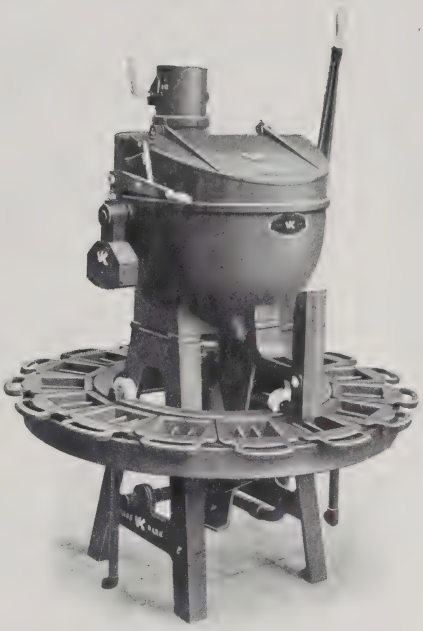

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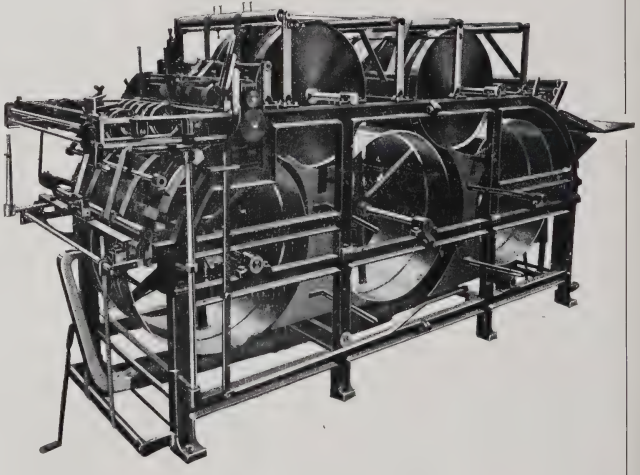

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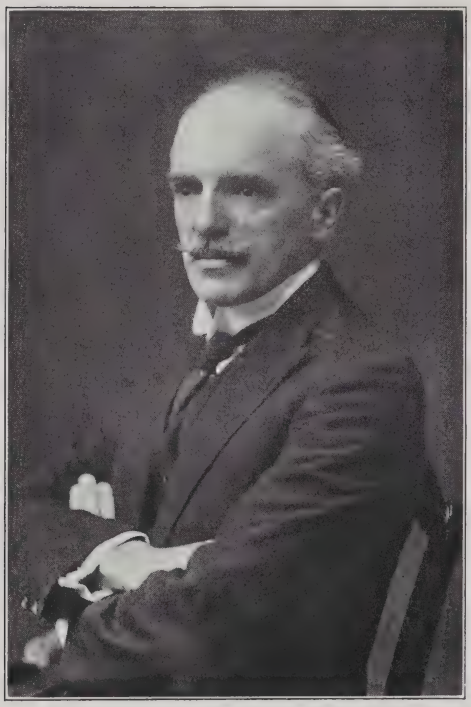
The Opener of the Exhibition

H.R.H. THE PRINCE HENRY, K.G.

The President of the Exhibition



W. HOWARD HAZELL, Esq., J.P.
(President of the Federation of Master Printers of Great Britain and Ireland).

THE EXHIBITION

A RECORD SUCCESS

Opening by H.R.H. PRINCE HENRY

THE Seventh International Exhibition of the Printing and Allied Trades is now over. But its good effects will be felt for a considerable time to come. It was a great success from every point of view. There was a record attendance, the largest number of exhibitors who have ever shown at any similar function, an unusually large number of overseas visitors, and from all we can hear phenomenally good business done.

Many factors contributed to this success. Four years in these days of keen engineering competition, and a rapid development in the processes of the printing industry, is a long time, and during that period there is a great accumulation of new machinery in every department which awakens keen interest throughout the whole printing trade.

Then, too, this leaves a generous time for organisation and publicity. In this connection the visits of the Organising Manager, Mr. F. W. Bridges, to South Africa, Canada, and the United States should be mentioned, for more than one important buyer from overseas testified he was present as the result of those enterprising journeys.

The cumulative influence of the previous exhibitions had a very marked effect this year. The result was that every piece of available space was filled with interesting new machinery and appliance for the printing and allied trades, and, in the words of an illustrious American, who speaks with some authority of such things, "Even America could not put up a show equal to this."

It was a happy and propitious thing that this year H.R.H. Prince Henry opened the Exhibition and gave to many a beautiful reminder of the Royal favour shown to the father of English printing when he set up his press at Westminster centuries ago.

The opening of the Exhibition on Saturday, May 16, was marked with dignity and enthusiasm. H.R.H. Prince Henry arrived at the Royal Agricultural Hall in time to be conducted right through the exhibits. He was received by the President of the Exhibition (Mr. W. Howard Hazell, J.P.) and Mr. F. W. Bridges, and then each member of the Exhibition Council was presented to His Royal Highness, after which a complete tour of the hall was made. Mr. Howard Hazell, together with Mr. W. H. Lock (Chairman of Council)—working doubtless to a well-thought-out time-table—succeeded in taking the royal visitor round all the stands; and, while it was not possible to initiate him into the whole mystery and art of printing in such a short time, it was possible to interest him in the main features of the Exhibition, and Prince Henry would have willingly lingered over some of the beautiful machinery, the mechanical typesetting, and particularly over the wonderful collection of 15th century books chosen from the unique library of Mr. George W. Jones, of The Sign of the Dolphin. But punctually to time the opening ceremony began.

The Royal Opening

ON a specially-erected platform, beautifully decorated with flowering plants, with the Prince were Mr. W. Howard Hazell, Mr. W. H. Lock, Mr. F. W. Bridges, Mr. K. W. Bridges, Mr. W. I. Burch, and Mr. S. Harper (Mayor of Islington).

Mr. Hazell said:—H.R.H. Prince Henry has honoured the Exhibition by coming here to open it to-day. He has made no perfunctory visit; he has seen practically everything in the Exhibition. His presence is proof of the great interest which all members of the Royal Family take in the prosperity and success of the great industries of this country. (Hear, hear, and applause.)

PRINCE HENRY'S SPEECH.

His Royal Highness Prince Henry, who was loudly cheered on rising to declare the Exhibition open, said:—Before declaring the Exhibition open I want to take the opportunity of saying what a great pleasure it has been to me to be here. It is a great pleasure to take part in an exhibition connected with such an important industry and historic craft as printing. I understand there are a quarter of a million people engaged in the printing business alone in this country, that its wages bill is over £50,000,000 per annum, and that it ranks in importance as the sixth industry of the country. When the great engineering trade, which makes the wonderful machinery which I have just seen, is added, together with the allied trades also represented, this is indeed an exhibition of great importance. My brief inspection of the machinery, of which I am glad to know 80 per cent. is of British manu-

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facture, fills me with admiration, and has deepened in me a wonder at the inventive genius, constructive skill and remarkable precision which go to making of the printed page and picture. The educational value of this wonderful Exhibition is very great even to the layman; it must be of *intense* interest and worth to those actually engaged in the printing craft. It is good to know that not only are visitors present from India, China, Japan, Australia, New Zealand, the United States and Canada, but that many thousands of workers vie with their employers in examining with care the latest products which are destined to contribute to the trade of which they are so proud. I am reminded in this connection that your Joint Industrial Council is an outstanding example to the whole industrial world of

PRINCE HENRY WALKS ROUND THE EXHIBITION.

what can be done by mutual conference between all sections of a trade not only in the settlement of disputes, but for the improvement in health conditions of labour, hours of working, and holidays. I hope this Exhibition will not only stimulate craft pride, but will also be the means of increasing our export trade and carrying the splendid results of British genius and skill to all the ends of the earth. In declaring this Exhibition open and wishing for it every success, I am by so doing wishing increased prosperity to the trade of our country and Empire. (Loud applause.)

THANKS TO H.R.H

Moving a vote of thanks to His Royal Highness, Mr. W. H. Lock said:—I desire to convey to H.R.H. our appreciation of his kindness in coming here to declare the Exhibition open with such graciousness and efficiency. It has given us an impetus which I believe will not be exhausted before we close our doors fourteen days hence. As representing the whole national body of exhibitors, I tender to H.R.H. our best and loyal thanks for his presence and his great interest in what we have been able to show him. I have been asked by the organisers to offer your Royal Highness this gold medal, struck in commemoration of the Exhibition, and a souvenir catalogue. I hope we may have another opportunity of showing you in greater detail some of the machines and processes employed in the great art and craft of printing. (Applause.)

Mr. W. I. Burch seconding, said:—On behalf of the exhibitors, I have great pleasure in seconding the vote of thanks. Our Exhibition shows the best and most efficient machinery to be found

PRINCE HENRY, MR. W. HOWARD HAZELL, AND MR. W. H. LOCK AT THE OPENING CEREMONY.

throughout the world. His Majesty the King and the members of the Royal Family have always shown the keenest interest in the printing industry, and the presence of H.R.H. is indicative of his own interest. (Applause.)

Replying, Prince Henry, who was again warmly received, said:—I feel that there are no thanks due to me, but that I owe a debt of gratitude to Mr. Hazell and the organisers for giving me an opportunity of inspecting the wonderful machinery in the printing and allied stationery trades. (Loud applause.)

On his departure the Prince was loudly cheered, and cheers were also called and given for the King and Queen. Prince Henry repeatedly raised his hat in acknowledgment as he left the Agricultural Hall.

Inaugural Luncheon

AT the inaugural luncheon Mr. W. Howard Hazell was again in the chair. Supporting him were:—The Bolivian, Esthonian and Swedish Consuls-General, the Columbian Czechoslovak, French, Greek, Italian, Norwegian, Portuguese, Roumanian, Swiss, Venezuelan and Jugo-Slavian commercial Attachés, Counsellors or Secretaries, the Deputy-Chairman of the Trade Delegation of the U.S.S.R. in Great Britain; also Mr. Robert Allister, Mr. R. A. Austen-Leigh, Mr. Percy Barringer (President of Stationers' Association), Mr. R. D. Blumenfeld, the Right Hon. C. W. Bowerman, M.P., Mr. S. Budhe (India), Mr. W. I. Burch, Mr. W. R. Codling, Mr. W. H. de Boltz, Mr. Gabriel Delmas, Mr. Philip T. Dodge, Mr. Norman Dodge (New York), Mr. Sydney Harper (Mayor of Islington), Sir Arthur R. Holbrook, M.P., Mr. George W. Jones, Mr. J. J. Keliher, Mr. R. T. Keily, Mr. Joseph King, Mr. F. W. Knightly, Mr. A. Langley, Mr. E. C. Lavauzelle, Mr. L. Lavauzelle, Lieut.-Col. E. F. Lawson, Mr. W. H. Lock, Mr. James McQuitty (Belfast), Mr. H. E. Poole, Mr. Sidney Reid, Lord Riddell, Sir Mark Sheldon, Mr. A. Dykes Spicer, Mr. Th. J. Verrijn Stuart, Sir G. Wyatt Truscott, Mr. Edward Unwin, Mr. F. L. van der Bom, Mr. Arthur H. Walker, Mr. Gerard Wetterwal, and Mr. W. B. Wykes.

Proposing "Success to the Exhibition," after the loyal toast had been drunk, Col. Sir Arthur R. Holbrook, M.P., said:—I was thinking today when Prince Henry was declaring the Exhibition open that I was witnessing a repetition of history. A short time ago I saw a picture of Caxton, in his original office, receiving a visit from Edward IV., who was inspecting Caxton's process. It is most marvellous that in the 450 years that have elapsed scarcely any handicraft has made such extraordinary progress as the printing trade. (Applause.) A newspaper was once produced on a double demy Columbian press—the first number of the Portsmouth Times. Things have developed since then, and we have nearly done away with the manipulative handling of type, which has been superseded by mechanical methods in many of the ranges of typography.

It was a great inspiration to hear Prince Henry say that 80 per cent. of the machinery here is of British manufacture. It is a great achievement. (Hear, hear.) We can only hope that the time is not far distant when English printers will say that 100 per cent. of the machinery has been produced in England. (Applause.)

Many decry the printing trade, on the ground of health, wealth and position. I do not know how much health we get out of it; there is no great amount of money in it. No man can succeed in the printing industry without a certain amount, not only of manipulative, but of literary skill. It requires much education and knowledge if a man is to be successful in the printing trade. Unlike the man in the story told by the American who once saw a man tap the wheels of a railway carriage, and asked him for how long he had been doing it. "Thirty-two years, sir," was the reply. Then the American asked him what he tapped the wheels for. The man replied, "I'm damned if I know, sir." (Laughter.)

The Exhibition will encourage our friends engaged in the industry, and show them what developments are taking place, and help them to invest in the most up-to-date machinery, particularly when we find that His Majesty's Government is a strong competitor, at the expense of people engaged in private enterprise. (Hear, hear.) I am strongly in favour of private enterprise in industry. (Applause.) We have built up the greatness of our affairs by private enterprise. I hope the day is far distant before the Government tries to interfere with a system which has established us as the first commercial power in the world. (Hear, hear, and applause.)

I hope everyone in the trade will be induced to come here in order that they may see what is being done. I believe the Exhibition marks a milestone in the progress of the printing world, and in proposing the toast of "Success to the Exhibition" I couple with it the name of Mr. W. H. Lock.

Mr. W. H. Lock, responding, said: At the moment I am suffering from a plethora of matter I am like the sub-editor of a daily paper when the time has come to go to press, and does not know what he can leave out. To sustain my reputation for impartiality, and as a protector of the weak, I want to put in a word in defence of my friend Mr. Codling. It is rather belated of the gallant Colonel to let go at Mr. Codling in response to his attacks at the Master Printers' Federation four years ago. (Laughter.) As he is not on this list, I am his champion.

It has been stated that 80 per cent. of the exhibits are of British manufacture. Twenty per cent. is of foreign manufacture, but, happily, there is nothing of ex-enemy manufacture. Visitors here from America may believe that, while they may have machines more wonderful—and possibly more enterprising printers—they do not succeed, as printers' engineers, in getting together so fine an exhibition as they saw that day. We are representative here of two classes—the people who exhibit, and the people whom we hope to make our customers. I make an appeal to our printers to visit the Exhibition in their own interests.

Reference has been made to the matter of health in the printing trade. I want to say that there have been many changes in the sanitary conditions in the works engaged in the printing industry. The Joint Industrial Council—and it has the services of the best minds among the masters and men—is working hard getting out schemes for the benefit of the worker. It is now claimed that the printing offices rank about second in the matter of health. Continuing, Mr. Lock said that four years ago they were afraid, owing to the threatened coal and transport strike, that the exhibition would not go on after Wednesday night. There is (he said), fortunately, nothing of that kind to-day. But we are, at the moment, not out of the wood so far as economic depression is concerned. But at least we may claim a good deal of praise for our courage and enterprise in having started an exhibition in the way we have done. I thank you for the way you have received the toast.

Mr. Kenneth W. Bridges, secretary of the Exhibition Committee, proposed "The Visitors," and said: The work of making an exhibition falls

mainly into two classes—the collecting together under one roof of a great and representative display of all that is best and newest in the industry, and the stimulation of interest in those exhibits among as many as possible from all over the world, who would benefit by seeing them, and if I may say so without offence to that noble army of exhibitors whose loyal co-operation has made possible the display which was opened to the public view by H.R.H. an hour or so ago, the latter of those two tasks is even more important than the former. Round about 1915 and 1916 one heard the somewhat bitter jest that every seventh year of the war would be the most tremendous. Fortunately, there was no opportunity of verifying the truth of that pessimistic prognostication, but this is the seventh opening of an International Printing, Stationery, and Allied Trades Exhibition, and I think no one will be disposed to dispute that this gathering of distinguished visitors is the most tremendous of those occasions. We have here to-day with us representatives and high officials of many of the foreign diplomatic and consular services, and of practically every printing trade organisation, whether of employers or employes, in this country, together with those of many similar organisations from the British Dominions Overseas, from the Continent of Europe, and, in fact, from all parts of the world.

I feel I cannot pass over a toast of this kind without singling out for special welcome such gentlemen as Mr. Joseph King (Victorian Master Printers' Association), Mr. H. E. Poole (Queensland Master Printers' Association), Mr. R. T. Kelly (New South Wales Master Printers' and Connected Trades' Association), Mr. F. W. Knightly (South African Government Printer), Mr. Robert Allister (Federation of Master Printers of South Africa, also Newspaper Press Union of South Africa), Mr. W. H. de Boltz (Nigerian Government Printer), Mr. J. T. Riches (Zanzibar Government Printer), Mr. S. Budhe (Poona Master Printers' Association), Mr. W. R. Codling (H.M. Stationery Office), Mr. Percy Barringer (President, Stationers' Association), M. Gabriel Delmas (President, French Master Printers' Association), Mr. F. L. van der Bom (Dutch Union of Master Bookbinders); and I am sure that the many other exalted persons present will not resent my mentioning them. On behalf of the entire administration of the Exhibition, I extend to them all our heartiest welcome, and trust that they will be able to pack not only to-day, but also the whole of the coming fortnight, with hours of intense interest and benefit, not only may I say to themselves, but also to that noble army I earlier referred to.

I think the toast of the visitors on the occasion of an opening of an exhibition might be made elastic enough to include not only those whom we are so pleased to have with us to-day, but also that vast concourse of people who are interested in one side or another of this great industry, and for whom I am afraid accommodation could not be found in a dozen Agricultural Halls if they all elected to come at the same time. As many of you know, we are expecting official visits from the great majority of members of upwards of twenty printing trade organisations, including the federations and alliances of master-men, the associations and unions of employes, and not forgetting some thousand of those grand old men and women of the Printers' Pension Corporation whose active day's work is done.

In conclusion, but by no means of least importance, I give you the name of a gentleman of a character and personality upon which it would be an impertinence for me to attempt to dilate. If there is one man whose name, coupled with any toast, would ensure it the heartiest reception of the day so long as the printing craft exists, that man is Mr. Bowerman. I ask you, therefore, gentlemen, to be upstanding and to drink the health of our visitors to-day and all the to-morrows, coupling with that toast the name of the Right Hon. C. W. Bowerman, M.P.

The Rt. Hon. C. W. Bowerman, M.P., in responding, said:—It is something to be proud of to be a visitor to this Exhibition. And it is something to remember. One statement has been made by Sir Arthur that there was no money in the printing trade. Well, many years ago I heard similar remarks made, and I thought that the employers were living on their losses. (Laughter.) But when I look round and see the opulent gentlemen—(laughter)—connected with the trade I wonder whether any other trade could provide such an exhibition as this, and on a Saturday afternoon (when the employers are, as a rule, like Lord Riddell, on the golf course). (Laughter.) Then there has been mention of "giving away machines." The employers did not respond to that as they should. (Laughter.)

The advance of science in this industry is remarkable. Two hours ago I saw the first number of The Family Herald, published as a newspaper in 1847. That number can be seen in a little "shanty" upstairs, and it is a most interesting document. Everyone should see it.

The printing trade, like others, advances by scientific methods. There are no limits to its possibilities. I wonder what the old printer would say to the motor cars distributing the papers and to the linotype with its wonderful output. I passed through a room just now with lovely specimens of printing, not done by machinery, but lovely hand work, with the atmosphere of love about the work. I refer to the collection for which my friend Mr. George W. Jones is responsible. We know that the printing industry could not be carried on like that to-day, owing to the rush of modern conditions. Wonderful developments have taken place. With regard to health and leisure, the Joint Industrial Council is largely responsible for splendid work in this connection. Employers and men will benefit from their efforts. I would like to appeal to Lord Riddell for his opinion on that. These gentlemen of opulence and rank are among the best employers we have. (Applause.)

It is a great thing to say of this Exhibition that 80 per cent. of the machinery is of British manufacture. No doubt we had lagged behind in respect of machinery, but we had a strange habit when a piece of new machinery was produced of adapting it to our needs and forging ahead. (Cheers and applause.)

Mr. F. L. van der Bom (Holland) also responding, said: "The Dutch Union of Master Bookbinders started in 1900, had the intention to make the students of the trade of binders know and value each other. Further, this association made arrangements with the workmen concerning wages and labour conditions. It promoted the professional training. All this, however, only to restore to its place of honour the trade of bookbinding as such. In the sixteenth, seventeenth, and even yet in the beginning of the eighteenth

century, it was a trade worth mentioning; in the second half of the eighteenth and in the nineteenth century it decayed, and good students were very rare, while the rising mass work was introduced from Germany. In the latter half of the nineteenth century a change for the better was noticed, and the mechanical method is now technically quite as well arranged as the largest and best furnished establishments in Germany. Many English and American machines displaced the older types and the German ones. For mass work, therefore, we are quite up-to-date, but a drawback for the remunerativeness of this branch of bookbinding in Holland is the limited province of the language. Many machines indispensable to you cannot be used with profit in our country. By the side of the larger trade for mass production and stationery work there have also been good handicraft binders the last sixty years. The pictures of their pieces of work found a place now and then in your illustrated papers, more particularly in the studio. These binders, those artists in our trade, and not only those look up with admiration to your pioneers in the domain of the art of hand binding. With us the young workman already learns to know the name of Cobden Sanderson, the man who, inspired by Walter Crane and William Morris, brought about in bookbinding what the latter accomplished in printing.

Almost as high we value his pupils—Mrs. Douglas Cockerell, Sangorski, and Sutcliffe. The work of all of them is an ideal to the expert bookbinder, because in it is found the right relation between book and binding and ornament. The finish, too, both of book and ornament are technically perfect. Therefore, although the Dutch Union of Master Bookbinders had for some months past not yet the pleasure to be on corresponding terms with you, we have always been greatly interested in the work of our fellow tradesmen overseas. So when your invitation came to have a seat in the committee of honour for this Exhibition we were quite glad to accept it. Our board elected Mr. Proost and me to represent our association in this committee. Mr. Proost, who intended to be here, returning from America, was detained there longer than he expected to be, so that I must make an apology for him. Our thanks for the invitation to be present, our thanks, too, for what you showed us in this Exhibition. We pay our honour for the invitation, and wish you a successful exposition. May the ties between your country and ours be fastened, and those between the colleagues in particular be strengthened by this meeting.

Lord Riddell, proposing the health of Mr. F. W. Bridges, the organising manager of the Exhibition, said: Most people, if not all people, read daily, evening, or Sunday newspapers, and manage to criticise the persons who direct and print newspapers at such cheap prices. (Laughter.) But, happily, these adverse views do not extend to the trade and technical press. Mr. Bridges is the proprietor of what I believe to be a paper connected with the printing trade of our country. A most admirable production, and as a result of his ownership of that paper he was able some years ago to establish this Exhibition, which has now been running for 21 years. There is some uncertainty regarding the nationality of Mr. Bridges. (Laughter.) Many people believe that his successful commercial achievement points to his being a member of that ancient race—(laughter)—but, having examined his features, I come to the conclusion that they give no indication of that origin. Whatever his nationality—and I believe, in fact, he is a Londoner—there is no doubt about his success. It is a curious thing that people engaged in any enterprise always seem to require an honest broker to bring them together. I am a sound reader of The Matrimonial Gazette—(laughter)—and Mr. Bridges was cut out for running a paper of that kind. (Renewed laughter.) Happily for us, he has devoted his energies to the more remunerative work of acting as honest broker to his friends in the printing trade. I have been wondering what Mr. Caxton would have said—or what he is saying—about this Exhibition and its wonderful appliances. Take the linotype machine—a very wonderful thing, and I am glad to see here the man who is more responsible than anyone else for perfecting it. (Applause.) Two things that have revolutionised printing were the rotary printing press and cheap paper. I was anxious to-day to make a good speech. (Laughter.) There is a great opening in the speaking world for persons who can propose votes of thanks. I went to Filey to open a home with a gold key. I sincerely hope there will be more convalescent homes to open, and that gold keys will be presented on all occasions. (Laughter.)

Proceeding, Lord Riddell said: The machines here are very wonderful, but we cannot dispense with labour. Sir Arthur made a reference to machines which dispense with labour. I hope he will communicate with me about these machines. (Laughter.) It has been said there is no money in the printing trade. Well, I am glad to think there is a little. I am glad to think it is evenly distributed. I refer to the trade unions. As I was going back in the train from Filey I made a little calculation, and I find that the unions take out of the trade £300,000 a week in wages. It is a wonderful thing. (Hear, hear.) It tends to the stability of this country. (Applause.) I do not grudge high wages when I get good work. (Applause.) There is only one more thing I want to say: It is a great mistake to think that the Americans are so much superior to our own country. Of course, even Americans have some good qualities. (Laughter.) I have been much interested by the reports of some of the American trade unions. We in this country have led the way in trade unionism, and have done great things for the world through that fact. (Hear, hear.) The American trade unions and the masters' unions both speak of "the Trade"—as if they felt that they both must look after it.

It is a great commercial movement, this Exhibition (said Lord Riddell in conclusion), and I congratulate Mr. Bridges upon initiating it. It enables the trade to see what appliances are available. It is a great opportunity for everyone in the trade to bring his methods up to date. It is also a great opportunity for masters and men to come together on other matters than the discussion of wages. I urge every employer of labour to bring his men to this Exhibition. (Loud applause.)

Mr. F. W. Bridges, the Organising Manager of the Exhibition, in reply, said: It is extremely kind of Lord Riddell to propose this toast in the way he has done. You won't take him too seriously, of course, with regard to what he has said about myself. I am glad to be given the opportunity to say a few words. Last year it was my privilege to go to South Africa for three months, and I met many printers. I am glad to see some of them

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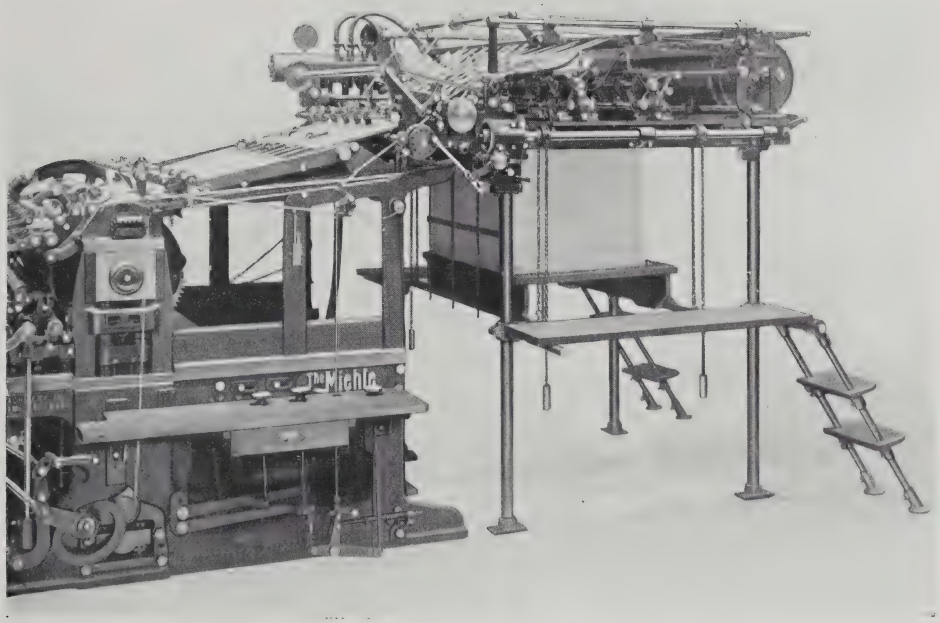

One of the important features of this Feeder is an arrangement whereby it is unnecessary to disturb the pile of sheets when printing the reverse side. To feed the sheets and turn them over, the pile is put into the feeder with the leading edge near the outer feed roller. The suckers then put the sheets on to the feed roller, which in turn carries them around the turning drum and between the carrying tapes, coming down on to the feed board again in the ordinary way. The pile feed board and pile delivery board are interchangeable with each other.

Write for a copy of a four-page descriptive folder, Ref. No. 808

LINOTYPE & MACHINERY LIMITED

9 KINGSWAY, LONDON

Please say you saw the Advertisement in THE CAXTON MAGAZINE.

here to-day. I extend to them on behalf of the Exhibition a very hearty welcome. I also had three months in Canada and America, and I am glad to know also that some of the friends I met there are here to-day. I have always regarded the printing trade as a family party. For 25 years you have been part and parcel of my life, and I of yours. No one in the printing trade has been shown more friendship than I have been shown. I want to refer to an event of a domestic character that took place some time ago when I introduced my two sons into the business. And they have been carrying on in my absences. One of them you have heard proposing "The Visitors" here to-day.

The progress of the printing trade is to a large extent due to our exhibitions. Each succeeding exhibition has been better than the previous one. These exhibitions stimulate interest and inventiveness. Every exhibition is attended by thousands of workers. Something like 40,000 tickets have been supplied to the trade unions for this Exhibition. (Applause.) The printing trade to-day is an ornament to the trade of the country. We rejoice that the Joint Industrial Council is doing a great work in bringing employers and emlpoyed together, and that work was being done in the printing trade long before the Whitley Councils. (Applause.) I believe this Exhibition will be the means of stimulating our trade, and that it will extend our ramifications in every part of the world. (Hear, hear.) People from as far off as Australia have come over specially to see the Exhibition, and I believe it is going to be the means of cementing the relationships between printers all over the world, and that it will leave the printing trade in a better and more prosperous condition than it was. I thank you for the toast you have proposed. (Loud applause.)

Sir George Wyatt Truscott, moving a vote of thanks to the Chairman, said: Our thanks are due to Mr. Hazell for the vision and the interest he has shown where the interest of the printing trade has been concerned. From the beginning he has impressed upon us the need of a proper system of costing, and it is very largely due to his strenuous and able work that the present system of costing has been so successfully introduced. (Hear, hear.) It has been the model upon which other industries have framed their systems.

After referring to the great work of Mr. Hazell's father, Sir George said: The son has worthily maintained in his own business house the high traditions set by the father. We congratulate him, and we congratulate ourselves on the fact that Mr. Hazell has now been placed in the chair as President of the great Federation of Master Printers, and it is our privilege, at an early stage in his presidency, to convey to him our congratulations on attaining that high honour. That he will grace the position we know. (Applause.) It only remains for us to hope that during his reign perfect peace will rest on the printing trade, that he will have a happy year of office, and that when he is numbered among the past presidents we shall have good reason—as I know we shall—to be proud. (Loud applause.)

Mr. W. Howard Hazell, in reply, said: I thank you, but I prefer to think that the toast applies to the great organisation of the Federation of Master Printers over which I have the honour to preside. What printing means to this country you can realise if, in one night, by the wave of the hand of a magician, all the machinery and plant were to disappear and cease to exist; if the world and his wife were to find themselves without their newspaper, with its political truths—or half-truths—no railway smashes recorded, no crimes or deaths, no case in the Bankruptcy Court, such as are recorded in The London Gazette. (Laughter.) Such exhibitions as this are an encouragement to progress; through them we are enabled to see the march of progress. This is an age of machinery, and there are some persons who lament the fact. They regret that hand production has ceased to exist. But real Knowledge can see Romance, as Kipling said, come in with the 9.15 suburban train. I look upon this Exhibition as the Romance of Invention. Behind the machinery lie the brain of the inventor and the skill of the engineer. It is not a glorification of machinery, but of human labour. "Back of the brawn the brain." (Hear, hear.) We see the labours of minds endeavouring to improve the methods of production. It was the man who made the machine. Let us all make our work beautiful in colour, form and line—create the charm and love of artistic work. There is no man I would rather take round this Exhibition than Caxton and show him the great developments that have taken place. No man would better appreciate their value.

In conclusion, Mr. Hazell said that the printing trade was a great responsibility, and it behoved them to work together in order to serve the community, and to seek after the highest things.

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Some Notes on the Printing Exhibition

By FRANK COLEBROOK

GREAT! That's the word. Especially considering that the last exhibition of the series, that of 1921, although finely engineered and organised and finely supported, must have somewhat disappointed one exhibitor after another. There had been great hopes in the business world that immediately after the Armistice, business would do what Gladstone said it did in the sixties—that it would "advance by leaps and bounds." A few cautions were entered. I for one published one article shortly after the war, in which I reminded readers that there was no such business advance just after Waterloo! But that, instead of this, there was general disillusionment, and unemployed men (for whom there was no regularised provision by national or local authorities) went roving about the country in desperate bands. I have often wished I had reiterated that warning, and impressed it more strongly, but then I did not know—none of us knew—how sadly these after-war experiences of a hundred years ago were likely to be repeated in our very different seeming day. I remembered the last great monetary crisis of 1890, the Baring trouble. Had that crisis occurred a hundred years ago it would almost certainly have worked out in innumerable bankruptcies, as did the crises of 1826, 1847, 1847 and 1857. But it was handled with the greater knowledge and larger spirit of solidarity of 1890, and extension of the trouble was averted. Misled to some extent by this happy issue of the Baring trouble, I failed in 1920 as others failed, adequately to read the signs of the times. We all went down into the dark days of the end of 1921 and '22 in more or less of bewilderment. Those particularly who, taking the necessarily expensive stands at the Printing Exhibition of 1921, hoped to reap much profit from that enterprise, must, to a considerable extent, have been disappointed.

I have just been glancing at a report of the 1921 Exhibition, and I am reminded how some 1921 exhibitors stayed out this time. Their mood of misgiving is understandable. It would be gratuitous and silly to blame them. All the same, it is delightful to realise that their's was not the general mood. If it had been, the project of the 1925 Exhibition might have been called off altogether. Instead of general pessimism we noted a general cheery bearing; not a happy-go-lucky but a happy-go-plucky disposition We saw the organiser, Mr. Bridges, with two partner sons, rising in the great manner to the organising task. And the machine makers of the craft, its general equipment suppliers, its ink makers, its engravers, its wholesale stationers, its contributors of miscellanies, rose also to the challenge in the great manner. The general impulse, and indeed decision, was to try again, to take stands in 1925, and to do in this Exhibition, not what one barely must, but all one could. And the result is great.

The exhibitors were very fortunate in their representatives on the stands. Repetition did not wither nor custom stale the freshness and vigour, and even gaiety of their response. Nay, they often responded, even before they had any question or approach to respond to. (Several good men came over from Ireland, which may explain how this could be). They were fine salesmen anyhow.

"Could you get order out of chaos"? one of the applicants for a job was asked by the head of a business, who just then was thinking of internal office reform rather than of business getting. "I don't know, Mr. Chaos," the young fellow answered, "but with such good lines as we've got to offer, I'd certainly get an order out of Mr. Chaos or out of anyone else." That young man was at the Hall. And so I think I may say was Mr. Chaos. At any rate there were chaotic minds out of which, for all their chaotic indefiniteness and lack of decision, orders were secured. Abundantly. Quite a number of stands became white with placards, "Sold to so-and-so," or "Six sold to one firm." Not all cared to parade their experiences, even when these were quite satisfactory. Mr. Bridges was assured of satisfaction on all hands.

Frankly, I attach even more weight to the fact that I heard the same story myself, for human nature being what it is, and Mr. Bridges' courtesy and attention being so well known and so much appreciated, it was natural that exhibitors should speak as appreciatively as they well could in anything they said to him or his sons. At any rate it is natural in our craft, which seems to be very free, taking it by and large, from littleness in business attitude. There was no reason why they should affect any more satisfaction than they really felt in speaking to me.

Early in the fortnight I was told by the maker of one of the main displays—"I thought you'd like to know, old friend, that we've sold the entire stand, and to the Continent."

It was a curious thought-compelling experience at this Exhibition that the Continent, particularly Germany, was a considerable buyer. For myself I regret that Germans were not exhibitors. I have no admiration for this new timidity, so contrary to our British traditions, and so untoward an industrial and national policy—the timidity that has barred ex-enemies, *seven years after the war*, from showing what they could do.

I have been asked to speak with particularity on different exhibits. First a general word. The most novel feature was undoubtedly the Typary. The Typary may connect up not simply with offset, but with photogravure.

Offset developments of different kinds have been outstanding features. In one case we saw a great super-imposing quad rotary machine, where a subject is impressed twice upon a rubber blanket, and then from the rubber blanket is impressed upon the paper. That is the Voirin, the French method. On the Crabtree stand we saw a very fine rotary quad, where the same purpose, that is, the purpose of building up the ink colour as strongly as possible to redeem offset from the reproach of insufficient vigour, has been achieved by another method. The subject is printed twice on the same paper, *i.e.*, it is overprinted. There are two plate and two blanket cylinders. It is interesting to see an impression cylinder dispensed with in one offset perfector

machine. Instead the paper is impressed between two powerful blanket cylinders.

All this offset may have made, I happen to know it did make, one very enthusiastic skilful letterpress printer feel rather sad, as he wondered whether he could permanently employ his large letterpress staff, with offset developing so much and so variously. But just as we say about man, that there is always room for a man of force, and one man makes room for many, so often it is, although not of course invariably, that a new process wins the field without absolutely driving another out of the field.

Auto feeding and semi-auto feeding have been other great features. And with that preliminary word, now to speak of some displays.

There is a movement for raising all the rollers clear of the forme, and so preventing streaks during short stops. The ink slabs are placed at the two ends of the type bed, and are made of a particular length with reference to securing that only ink that has been completely broken up by the distributor rollers can reach the forme rollers. The throw of one set can be varied independently of the other set. As the bed and the second impression cylinder are both driven direct from the bed motion shaft, and the first impression cylinder is driven direct from the second without any intermediate gearing, the register is positive.

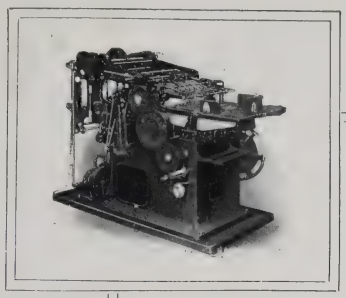
An efficient set-off arrangement consisting of an offset solution fountain and gear-driven rollers is provided on the second impression cylinder.

GENERAL VIEW OF THE MAIN HALL.

The great feature of the Linotype stand, to my mind, was the L. & M. two-revolution Perfector (taking sheet 44 in. by 64 in., with other sizes in contemplation). It is a machine for which the printing world has been waiting. The great concourse of master printers who recently and so pleasantly travelled from Buxton to the L. & M. works at Altrincham, in Cheshire, probably were as impressed by this as by anything they saw or heard. The bed movement is identical with the L. & M Miehle's. The bed gear rotates on a stationary spindle, and is driven from the bed shaft by a crank. It is moved in a lateral direction on the stationary spindle and the crank to engage alternately with the upper and lower bed racks. The rack hanger has been specially braced to give the greatest rigidity when printing in the top and bottom racks, so as to ensure dead register.

The delivery is of the reciprocating carriage type supporting endless tapes. These tapes interpose the continuously running tapes down which the printed sheets travel from the delivery drum, so that the printed sheet is deposited on to the carriage tapes during their outward stroke, but during the inward stroke the carriage tapes recede from under the printed sheets, which are deposited on to the delivery board. As the tapes roll from underneath the sheet which is being delivered there is no possibility of the ink slurring. Combined with this delivery is a fly delivery.

As always, L. & M. was a rallying sign, and probably the L. & M. stall in its central position was the rendezvous of many who came from all parts of the country to see the exhibits and also to meet friends. Seven Linotypes stood upon this stand. The " All-Display " Linotype was there.



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Kelly Press

A REVOLUTION

IT'S now over five years ago that the Kelly started revolutionising the English job press room. Too slow a process to be sensational, particularly in this country, but nevertheless, a true revolution.

Two-revolution, in fact. That's why the Kelly has succeeded. It's not a freak, or a platen in disguise. Just a two-revolution in which not one atom of printing stability and reliability has been sacrificed to speed. Yet, the speed of the Kelly is greater than that of other machines giving results inferior to the Kelly product.

The Kelly prints better and more economically any commercial work coming within its range of sizes. It will stand up to the heaviest formes and give dead register and delighted satisfaction on three-colour process work.

Moreover, the Kelly has been doing this for five years. The Kelly had to win through entirely on its own merits as a machine, and it has conclusively proved its unapproachable value.

The 1925 method is the Kelly method . . *and it pays.*

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CAMCO

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This is brought out for the rapid and economic composition of large display faces from 18-point to 36-point direct from a single keyboard. It is like the Standard Model 4 with side magzines, except that the channels of the main magazines are extra wide to suit large faces. The keyboard has the standard ninety keys, of which only seventy-two are used.

A new Model 6 Linotype, with four main magazines and four side magazines, serves for all faces from 5-point to 48-point, set direct from the single standard keyboard of 90 keys. The "mats" from two main and two side magazines can be used in one and the same line, owing to the provision of two distributors similar to those on the Model 6 Linotype, except that in the case of the side magazines double distributors are extended to cover the side section. Great for dictionary style work.

In the case of the Model 4, the number of possible matrix equipments is practically unlimited, and suitable equipments are readily prepared for special customers.

In general it might be right to say that the L. & M. ambition as regards Linotypes was first to provide a remarkable versatility, because no two printing offices have quite the same ordinary experience and requirements. With this, it all the time endeavoured to promote a very high quality. Perhaps of late the stress has been at least as much upon the maintenance of very high quality and the provision of the most serviceable matrices, as upon versatility *per se*.

The Linotype Model 4 with side magazines is a machine with two additional magazines. These do not require an auxiliary keyboard. From these can be set faces from 18-point to 36-point.

Electric heating of Linotype pots, to promote economy and avoid other occasional unpleasant accompaniments of heating, and, I suppose, to facilitate the maintenance of an even temperature, is a comparatively recent addition to the Linotype advantages. As I move among daily paper offices, I encounter these " lino " electric heaters enterprisingly and numerously installed, and they are, of course, as serviceable in commercial works. The heating element remains completely immersed in the molten metal, and does not interfere with skimming and surface cleaning. The terminal box is placed on the outside of the pot.

The Intertype had their story to tell you at the Hall of the introduction of Intertypes into The Times office, to name one outstanding user. The Times, until comparatively recently, relied entirely upon Monotype composition, and it still makes great avail of Monotype day by day, but it has chosen to reinforce this Monotype power by a battery of twenty-one Intertypes, put in at various times, beginning with three in 1914, three more during the war, six soon after Armistice, six last year, and three this year. The Intertype showed particulars of a great many repeat orders. The South Wales News put in eighteen Intertypes six years ago, six more four years ago, and six more two years ago; thirty in all. The Aberdeen Free Press has sixteen, eight put in six years ago, eight more four years ago. The Liverpool Daily Post and Echo, which has been making a great many improvements of late—structural and mechanical—put in two Intertypes three years ago and eight more last year. The Intertype claims to have dispensed with a large number of parts which elsewhere have been deemed necessary to the make of other composing machines. The main elements of the Intertype are standardised, so that it is comparatively easy to make modifications to suit particular users.

The machine is built on a standard unit system, not on different models. One, two or more magazines can be added to any unit in accordance with the needs of the user. The machine can work from 5-pt. to 60-pt., and from 4 ems to 42 ems. The assembler has a ball-bearing positive action which makes transposition of the matrices practically impossible. In the electric metal heater the heater elements are arranged in pockets outside the pot to avoid burning the metal. The arrangement of the pockets is made to ensure even heating.

The Intertype moulds are very conveniently placed. The desire of the makers has been to secure an improvement over any other method in quickened change and in clean operation. In the Intertype universal ejector solid blades take the place of the old-fashioned sectional blades.

Intertype matrices are designed to give greater freedom generally during distribution and a straighter drop into the magazine, but it is suggested that ordinary linotype matrices could be used with equal facility.

Self-geared inking apparatus for Wharfedales and geared inkers for two-colour machines and geared inker distributors have for many years been things to which T. C. Thompson & Son, the well-known Manchester printers' engineers, have devoted a great deal of attention. We were reminded of this at their stand. One distinctive helpfulness manifested by this firm was their contrivance as engineers to get the longest amount of open platen time available for the feeder. After all there is no point in having more time than is necessary taken up by the actual impression and cutting short the time during which a man is manipulating and placing his sheet—I mean when light " jobbing " is being printed.

Thompson's 32 in. " Gem " guillotine hand clamp made an appeal to me, with its very powerful worm gear action, and it's very quick adjustment of the back gauge.

Stamps are not necessarily all postal stamps. Forgive that obvious reminder. Mr. Sessions, of York, has built up quite a fine specialist connection with poster stamps; and stamps of all sorts are constantly being printed to be affixed to letters or other printed issues to carry certain significance or perhaps appeal. Whatever they are, stamps when printed in long numbers have to be perforated.

I think the Mergenthaler Linotype Co. in the States have a special connection with the Bartlett-Orr firm. The Bartlett-Orr people began as designers. Eventually they added to this the service of art printers, producing their effects by linotypes. I am so far from wanting to suggest by this that the desirable thing is an enormous variety of faces that I may recall that the Bartlett-Orr firm, who have given such a lead to the craft in beauty and strength of design, when they decided to become printers, adopted only nine faces of type, these to be sure in a strong series, and after about a dozen or fifteen years, during which they had established an international reputation for the strength and dignity and vigour of their display and its artistic quality, yet had only nine faces. They found that a few faces, well selected and in sufficient series, meet the requirements of those who know beauty in print when they see it.

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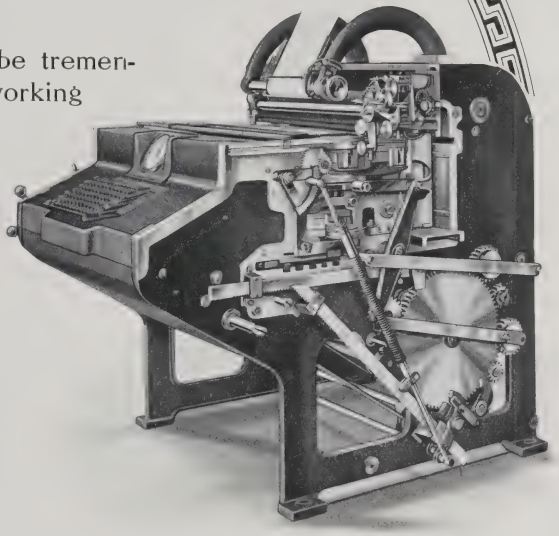
Is the latest development in advanced printing methods.

It enables output to be tremendously increased and working costs greatly reduced



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Demonstrations gladly given on request.

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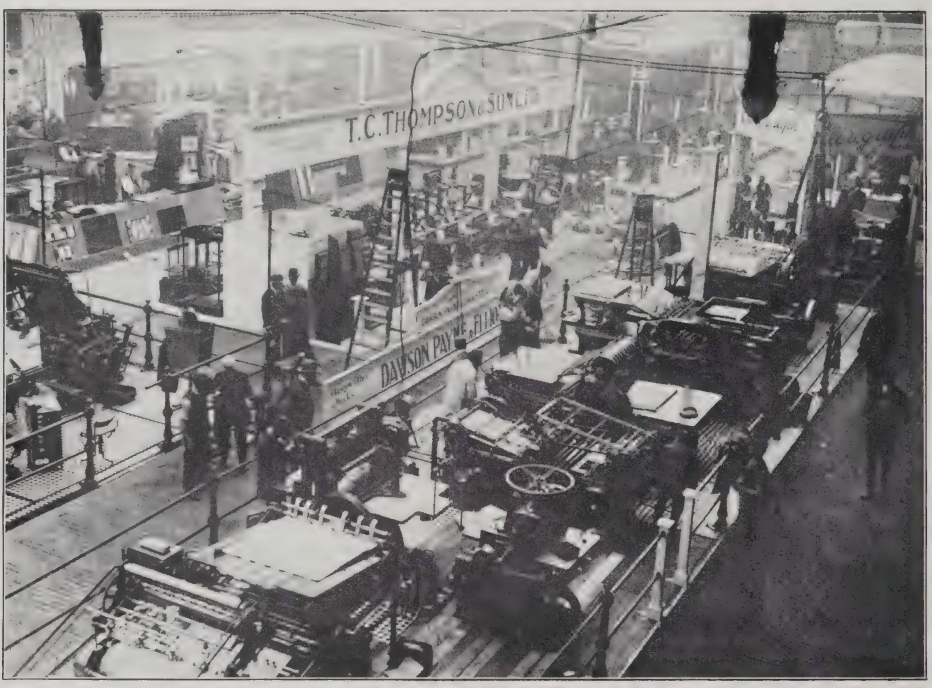
Messrs. Grover, of Britannia Works, Stratford, E., showed three or four types of their perforators. I encounter the Grover perforator as I go about the country on inspection work, and never have I heard of their failing to do their perforation correctly and swiftly. Such a very little fault in adjustment can mean sad lines of perforation across the face of the monarch, and, of course, destruction of the stamps.

One noted on the Grover stand a simplified pinning table with special arrangement of punch boxes with each spur of the comb adjustable independently for "wet" work. Type 4 machine, it is claimed, is very easy and effective in working on cheque book perforation. Type 6 has a special form of stepping gear by which regular perforation



can be made with an irregular "beat" when required to provide for a guillotining or binding margin.

In their stamp perforating work, Messrs. Grover perforate one hole short of the full measure of the stamp, the comb in the next blow completing the previous stamp, and, of course, carrying on the perforation. In rubber and celluloid work they perforate up to six rows at a time. The die box comprises the pin plate, a gunmetal guide and the bottom die. In the standard stamp perforating dies there may be as many as 700 holes in each. The die perforates a clean hole, leaving no whiskers on the reverse side.

When using gummed paper which has been printed it will be found that in parts the paper will be warped. In stamp work this must be allowed for, so skewing micrometers are provided at either side. These micrometers do not skew the paper, but skew the pin box in relation to it. Of course the adjustment may differ in every ream. It needs constant attention. The paper is fed under dies by means of pins, which pins can be adjusted also by micrometers to take up the work at points between printed surfaces.

In Messrs. Grover's continuous reel perforating machine the die box is similar to the straight line type, but instead of a patented pin table a continuous band of steel tapes is provided. Upon these tapes a series of studs are fitted, and holes corresponding thereto are punched in the margin of the paper reels, this punching forming part of the printing operation. A perfect register is thus provided between the separate printing and perforating operations, and error cannot extend beyond one impression of the printing plate, because a new set of register holes comes into operation each time.

At the back of each machine, with the exception of the continuous perforator, are special delivery grippers. These work in harmony with the stripping plate of the punch box, and take control of the sheets during the return stroke of the punch box. When fully released by the punch box the sheets are drawn through the machine a distance equal to one stamp depth, and are held until the punch box again takes control. These delivery grippers are adjustable on a micrometer scale. These adjustments can be made under one thousandth of an inch; in fact one ten thousandth is definable.

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Stationery and Allied Trades

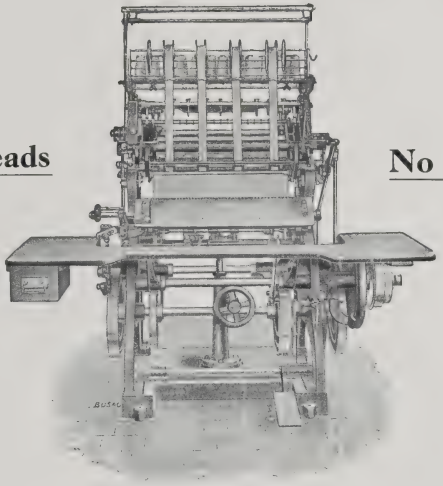
EXHIBITION

STAND NO. 4 ROW C GILBEY HALL

We introduced entirely New Models of our

"Martini" Simplified Book Sewing Machines

No Needle Heads **No Needle Heads**



The Latest and most up-to-date SEWING MACHINE on the Market, which eliminates the old principle of Needle Heads, thereby simplifying the Machine and giving stronger and tighter sewing.

We also exhibited our

"MARTINI" Thread Stitching & Knotting Machine

designed for stitching with thread all classes of work hitherto stitched by wire, also for Card Looping, etc., and in addition a new Looping Machine capable of dealing with very thick cord and with material up to 1in. thickness.

If you were unable to see these Machines write for full particulars, etc.

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A printing exhibition might as well be—an exhibition of printing. In this seventh of the series of international exhibitions this has been recognised, and once we did recognise it we began at the beginning. Mr. George W. Jones came to our aid. It has been well and truly said that Mr. George Jones is an artist who expresses his art instinct by the medium of print, just as another artist expresses himself by the medium of sculpture, and another by the medium of music. Mr. Jones is also one of those not too numerous artists who can make other people become like themselves. He is a past master in printing, and is also a successful man of business, though he avers that the constraint upon him to buy glorious old books is like Aaron's rod in that it even swallows up a great deal of a successful printer's resources.

A fairly large room was given up entirely to Mr. Jones's books. Here was a manuscript exquisitely written on vellum in humanistic script in the 15th century. A footnote told us that it was handwriting of this kind that the early printers took as their model for the first Roman type. The size of the written letter was about our 14-point. Mr. Jones showed a page of the Mazarin Bible, the first Bible printed, I think, either by Gutenburg or Fust and Schœffer about 1455. It is the so-called 42-line Bible, because that is the number of lines in a page.

The well-known Nuremburg Chronicle (1493) was shown. This abundantly illustrated Chronicle shows the work of the illuminator supplementing that of the printer. There are more than 1,400 woodcuts; 1,200 of these, however, being repeats. We saw the first Bible printed with a date: by Fust and Schœffer of Mainz, 1462. Fust and Schœffer printed in partnership after the separation of Fust and Gutenburg. Schœffer was perhaps the greatest of German printers.

Now *re* the Typary and Typon. The former is the name of the new type-printing machine which has been brought over from Switzerland. It is described by the makers as practically automatic throughout and continuous. They contend that it will set up to 10,000 letters per hour—letters with a wide variety of face. Therefore, it is anticipated, I think not unreasonably, that it may signify an immense addition to the power of the lithographic offset printer—indeed, to the power of the printer as printer, irrespective of whether he has been a letterpress or litho man heretofore.

A few years ago I interested myself very much in the Manul process invented by Ullman. Two or three years ago, some printers in the North showed me (I am sure, not without a little real alarm) two or three books which had even then been reproduced by this Manul process. I was told that in one case, of a reprint edition of about 2,000, a saving of some £20 or more was demonstrably effected through Manul, even as against the cheap reprinting that could have been made by letterpress, seeing that all the moulds were available and were in good condition.

Herr Spama, of Leipzig, very soon had twenty or thirty offset machines installed, working on these Manul lines. The Manul process came into the hands of the Polygraphic Company, of Laupen-Berne, Switzerland. The Polygraphic Company possesses, one may say, one of the best-equipped printing plants in Europe. Mr. Feller, its managing director, was keen on bringing out a typesetting machine to enlarge the range of the Manul; to do very much more by the printing-down process involved in the Manul method, than merely reproducing a printed page facsim. The result is seen in this revolutionary machine, the Typary.

By the way, in one of the Typary pamphlets it is called a " revoluntionary " process! I have heard of those who are determined to do a certain thing " or ' dine ' in the attempt." Many good ideas are doubtless helped forward by familiar and friendly luncheon talk, both in industry and in high politics. Colonel House, at a very critical stage of war conference negotiations, when all who were round the conference table in Paris had reached absolute deadlock, artfully contrived that the clock, which had only reached noon, should be put forward an hour, and, pointing to its one o'clock, he called a halt, and took the whole company off to lunch straightaway. Ideas which had been tabooed as revolutionary now became " revoluntionary " and took on a new aspect. The business of accommodation and settlement went through like—what shall I say?—went through " like one o'clock."

Model " H " machine was the Typary shown at the Hall. When the operator is ready to set, he first sees to it that the 89 magazines containing the desired face of type (say 8-point) are duly placed in the machine; then the length of line is fixed, the spacing device set; then the operator connects and starts up the electro-motor equipment, adjusts the inking mechanism, and inserts the blank proof sheet in the platen. He then taps the type keys; that releases the setting and recording mechanism. No letter is printed until the whole line is composed and justified. The line can be anything up to about 33 picas. Indentations and tabular work are easily manageable. A dial with a movable indicator, which measures off the typography points as the operator taps the line—moving forward a small space for " f " and a larger space for " w " or for " m "—is placed immediately above the keyboard. As the operator starts up the power operations, the type bars are seen emerging from the magazines and travelling across the table towards the operator into their proper positions.

Characters do not stand up crosswise like letters on a lino slug, but in line with the length of the bar, that is, at right angles to the direction of the letter on the lino slugs. Each magazine contains 15 type bars of different widths, the widest being nearly four times as wide as the narrowest; and it contains the spaces. There are 225 types to each magazine, and one spacing fitment. These 225 types comprise two different faces—Roman and Italic, or Roman and a kind of Old Face. Each magazine has two alphabets of lower-case and capitals, with all accessory signs. All magazines have the same number of type bars in the same order. Directly the line is complete and the electric force switched on, the printing platen moves forward and downward, to the face of the type, registers the impression, and returns to the normal position. The proof sheet bearing the print of the line moves forward one space round the platen.

The time needed for the automatic assembly, alignment, justification, inking and printing, and the return of the platen is approximately 12 seconds. The operator is not kept waiting while these processes are going on continuously and automatically. He watches his indicator on the dial, and as soon as it returns to zero (which takes place directly the automatic process of assembly starts) he proceeds to type the next line. So you may say the process is continuous. It is possible, if the operator is sufficiently expert, to have three lines

in the making—one line printing, and a second line registered for the magazines as soon as they are again in normal position, while the operator is composing a third line.

What of corrections? If the operator sees he has made a mistake, he brings a distributing lever into action by a foot movement. This returns the type bars to magazines without their going through the printing process, and the operator starts the line again. Author's corrections have to be done by the slower process of cutting off a line of the print with a little strip guillotine provided for the purpose and putting it down with clips in its place over the line for which it is substituted. Different coloured correction clips are used to denote whether it's a first, second or third correction. If they worked for me, they'd have a particular colour for my thirtieth correction.

So much for the Typary. Now for the Typon.

That is the name given to a new photographic paper made in strip film and non-strip, and, I take it, to the whole printing-down and transfer process. (By the way, Typary & Typon London offices are 1-4, Red Lion Passage, Fleet Street, E.C.4.) I went into the dark room on the Typary stand. There I saw the paper which had been typed on this Typary machine, brought into the dark room, and variously treated until what was obtained was a paper negative of stout tensile quality entirely fit for placing down upon aluminium or zinc litho printing plate. When that has happened Typon has done its part. Henceforth it is ordinary offset litho.

I must not stay to dwell upon this, having so much else to say, and I might mis-state some details of the process—not having been many minutes in the room; but there was evidently one quite special developing bath, and one dish with ordinary hypo. A Baryt paper played its part. Further, I noted a large yellow filter, similar, I presume, in its efficacy to the famous " K " filter with which my friend Dr. Kenneth Mees, of Messrs. Wratten & Wainwright, now part of Kodak, Ltd., made us so familiar years ago. This yellow filter was for the purpose of dealing with some sheet which was printed upon both sides, and both of whose printed faces had to be reproduced. The method was to stop out what was not wanted by use of this large yellow glass filter. Thus you could obtain a print simply and solely of what was at the back of the sheet. This print from what was on the back of the original then became a separate original.

I spoke to several practical men in the Hall about it all, and I heard nowhere any disparaging or deprecating word. The conclusion seemed to be that it was a machine likely to prove quite practicable for, at any rate, a considerable body of work.

The Hacker Gauge is a clever thing, and probably many a firm would have been well advised to have installed it long ago. To-day they will be well advised to have a look at the Hacker certainly, and also to go and have a look at the very inexpensive type-high gauge which Messrs. Hewitt Brothers (of Field Street, King's Cross) have brought out. Mr. Hewitt demonstrated to me the wonderful precision with which this tells in the thousandths of an inch by how much a particular part of a block is out of type-height. On the same Hewitt Stand I saw a modern high-speed safety Cropper platen, working at approximately 3,000, and combining, as the makers with proper pride claimed, the simplicity of the Cropper and the capacity of a Victoria, at much higher speeds. It seemed like a small Falcon with a very strong arm.

Hewitt's Combined Finishing Machine, dealing with all dressing operations of the electro or stereo plate, is well worth attention. They had a good deal of foundry machinery on the stand.

I think I was most taken at the Connolly stand by the Quad-demy Rotary Offset. The paper is passed between two blanket cylinders. *There is no impression cylinder.* These two blanket cylinders both carry the picture, impart the picture, and supply the impression and perfect the job. The sheet, having been pressed between them, is carried to a transfer cylinder below.

Hard by on the Connolly stand was a Quad-demy Two-colour with a large impression cylinder twice the size of the blanket cylinders. Two sheets are always in transit. Two impression colours are first made *on one* blanket; then they are transferred simultaneously to the sheet; let me repeat—two printings of the same subject, superposed on one blanket, and then transferred in one action to the one sheet of paper. As I said just now, in the case of a Crabtree two-colour superimposing offset, there are two blanket cylinders, and each of them gives its impression of the same subject on to the paper; that is the method of building up the colour and securing strength and intensity which the Yorkshire firm employ. Nothing but adequate experience can tell which of these two daring methods is the best.

The medium-sized Rotary Offset by Voirin was working throughout the exhibition upon a thirteen-colour job, and this although it was an entirely new machine. A 13 in. by 22 in. Voirin sheet-fed photogravure machine shown on the stand has differential gearing, like a motor-car.

Hard by was a Medium Offset Proofing and Reversing Press. Also on the stand I saw a Single-colour Rotary High-speed Offset Double-demy, running at 4,000 an hour on some Swain halftones. Messrs. Connolly showed them with very great pride. Certainly they were remarkably good offset printing.

Of course, the product of offset, like the product of any process, must be judged not simply by the question whether it is good in itself; it must be judged as to whether it is as good for the buyer's purpose as can be secured by any other method.

The Connolly stand also showed a centric gear Camera for halftone and photo-litho work, to take plates up to 24 in. x 24in. on a patent volute spring stand. This camera was designed by Mr. Connolly, and incorporates many new features. Some of the most outstanding features include the perfectly rigid top and bottom guide to the plate carrier, and extended racks beyond the back, which assure that both the front and back of the camera will always be parallel. The camera can easily swing for prism work, and in spite of its size one man can with very little effort move it along the stand.

Connollys made a large triple Camera for the Amalgamated Press.

There is in this outfit a separate camera for process, litho and photogravure work respectively, and any two of these can be swung out of the way when the third is in use.

Among Connolly's other small exhibits are carton-making machines, including a small vertical capstan type carton punching machine, a similar large machine and an automatic rotary

carton, punching, creasing and slitting machine, taking 3,000 sheets quad crown size per hour. The automatic feeder will lift up boards weighing 7-lbs.

Talking of halftone, I may as well here as anywhere else speak of what the halftone engravers have done. I suppose ten years ago it would be unbelievable that they could make a joint exhibit, or if they had done so it would have been a miscellaneous, rather impersonal, and not specially informing exhibit of undescribed work. I can hardly think that members would have put together in a joint exhibit just the same kind of display and have conveyed in any words, printed or typewritten under or near their specimens, just the same kind of intimations and information to the public as they might have conveyed in separate displays, quite unconnected with each other. It was delightful to see how on this occasion they decided on a joint show and carried it through in the frank manner. The recesses out of the Gallery at the Hall have always seemed to me deplorably uninteresting, not to say dismal, but the Engravers' Federation took one and made a delightful lounge of it. Right round its three sides, each man had his own particular tabernacle. There we had the Star Process Co. setting out for the passer-by that he could learn at their stand how blocks were made, and living up to that promise, as anyone found who glanced at what they had carefully brought together and had annotated.

In another recess, Mr. Hislop, so well known as an engraver, and so able a technical college instructor in halftone in Edinburgh, and already well accredited as one of the leaders in the Process Engravers' Federation, had his display. As becomes a technical instructor, he placed underneath various subjects a few explanatory lines which really told an observing customer a very great deal as to what was obtainable by him to meet a specific requirement, or a specific taste or fancy.

Hard by Mr. Craske showed how with 100-line screen, if the work were intelligently treated, an appearance as of a 150-line screen could be obtained. He must also have pleased his critics with his " Baby " and also with the " Old Man " hard by. He showed two blocks about 15 in. by 20 in. by my recollection, with immensely large grain, but giving a delightful poster effect from merely the other side of the lounge. Advertisers are not alive to the way in which it is possible to enlarge a very fine halftone, and work the enlargement as a line block.

The Marshall Engraving Co., who have their eyes upon everything going on in the world in engraving, were there. Mr. Eamer, one of the directors, was recently in the States seeing the very latest that could be shown in plate making or offset. Of course, you had something to learn there, particularly in regard to effective and economic embossing, and incidentally as to the mechanical and ready ascertainment of block reduction dimensions.

Nickeloid, Ltd., showed particularly how fine three- or four-colour halftone effect could be improved by the glaze being taken out of the paper by their " Ultimatt." The gravure work of the Sun Engraving Co. and Messrs. Swain's and others was very strong and powerful. Others illustrated the part that the fourth colour in halftone engraving can effectively play. Two things indeed struck me—the great success of grey delicate tints and the candour with which the method of securing them was indicated, and secondly the high success of pictorial subjects, as " The game of chess " " The game of cards." A field of racing horses was one such as I, ten years ago, would frankly never have expected to see produced by three-colour.

The Lanston Monotype Corporation is nothing if not arithmetical. Quite a pleasing little addition or subtraction sum challenged our attention on the Mono stand. Four slip proofs were shown. They represented a complete fount of 24-point type just as the type was taken from the Monotype machine, the total weight being 112 lbs. The casting, including all on-cost items, represented, for the three hours occupied, about fifteen shillings. This meant that the matter was produced at 1⅛d. per lb. The metal itself cost 5d. per lb., making the total cost 6⅛d. per lb. The Monotype people suggest 3s. as a fair average price for foundry type of the same character. So we came to this, that the Monotype cost about £3, and at 3s. per lb. the same amount of foundry type would cost £16 16s. Q.E.D., as we used to say in my Euclid days.

The Monotype Caster was a very interesting feature of the Lanston Monotype Corporation stand. Its popularity is rapidly increasing. The display type cast by the machine is declared to be equal to the product of the leading typefounders. I used to think that Monotype composition weighed a little lighter than typefounders' type, but I found that the weights of equal areas of type as recorded upon this stand indicated that the Mono was heavier.

Metal problems want a great deal of understanding. Without being an expert, one may readily realise that metal which is to be satisfactorily cast at a very great rate, as Monotype letters are cast, must not be too hard nor too brittle. At the same time, Monotype metal is well known in the craft as needing to be of very high standard. I am not surprised at the high claims put forward.

The Miller High-speed Cylinder Jobbing Press and the famous " Craftsman " Platen were both shown in operation at the Lanston Monotype stand. The moving towards each other of the impression cylinder and forme as in this High-speed Miller and the " Craftsman " and in the Vertical Miehle and the Connoll " Vercyl," while we have become familiarised with it through a year or two, is yet comparatively speaking an innovation, and even a startling innovation. Startling in this sense, that one wonders why on earth one did not think of it before.

Of course, the enterprising Ludlow was shown. The flexible Ludlow allows a dozen or more compositors to be setting different sizes of types and lines of different em lengths, and to work it without any mould or machine change. They work up to 6-point in one case and 48-point in another.

On the Cropper-Charlton stand one noted particularly the variable speed gearbox for attaching to printing machines to enable the operator to vary the speed of his machine according to the stock he is printing.

The years go by. I can see myself again as 35 years ago taking my turn now and again on a Cropper crown-folio, and quite enjoying the physical and mental exercise. I shall always have a kindly feeling for the name of Cropper.

The Cropper-Charlton Sterling heavy platen, made only in demy-folio 12 in. by 18 in., is in-

tended to give a printer at a lower cost that which he may have been thinking he could only secure by a very heavy platen and a heavy outlay; and every printer ordering this Sterling is giving employment in this country—at Nottingham.

Messrs. Peter Carmichael & Co., Ltd., of Carmic Works, Southampton Street, Camberwell, exhibited several of their machines, many of which are in use in envelope works in this country and abroad. These must be of great interest to all envelope manufacturers. Among their exhibits were: The Carmic Adjustable Envelope Folding Machine, for any size envelope or official bag. The machine exhibited had a range from $5\frac{3}{4}$ in. by $3\frac{1}{2}$ in. up to 13 in. by 7 in. Its output is 4,000 per hour. The Carmic Victory Folding Machine, which they claim to run at 6.000 per hour, produces envelopes of any size with gummed flaps. The Carmic (one side adjustable) Folding Machine turns out perfect bags or envelopes at a speed of 5,000 per hour. The Carm Power Shape or Straight-across Flap Gumming Machine gums the flaps of envelopes, wallets, official bags, or seed bags, either shaped or straight across the flaps, and has a very extensive range of sizes. Its production is 6,000 to 7,000 per hour of well-gummed blanks. The firm have only had this machine upon the market about twelve months, and so far the demand has fully justified its enterprise.

Printing ink is the balm for the world's wounds. Ink-making was well represented. Just as we speak of the men behind the machine, so we must speak of the men behind the ink mill. Otherwise mere proofs of work might be misleading. It might be a case of " speci-men " without the " men."

I know John Kidd's ink factory very well; and that there is no sparing of trouble or outlay in the effort to be always bettering the best. The firm showed various prints, colour or monotone, to illustrate particularly the advance since the last Exhibition; and especially in offset; with a good show, too, of photogravure printing. Kidd's also make rollers, of course; they turn their roller-making Gatling guns to bombard that enemy of the State—the long-lasting trade depression.

Bag-making was shown by Messrs. Strachan & Henshaw, Ltd., Whitehall Ironworks, Whitehall, Bristol. To their entirely new and simplified paper bag making machine was attached one of their rotary web printers, showing the very latest and most economical combination for the production of printed plain or satchel shape paper bags at the one operation. The bag-making machine is constructed throughout to operate on the rotary principle, the process of cross pasting and folding being performed by rotary mechanism, and throughout the printing and manufacture of the bag every movement and operation are entirely free of cam or crank or irregular movement whatsoever, and the collection and counting of the finished bags is accomplished on an entirely new, simplified and effective principle. Printed paper bags are produced quite satisfactorily at 150 or more bags per minute, according to size of bag and quality of paper.

At the stand of the British Thomson-Houston Co., Ltd., electrical engineers and manufacturers, of Rugby, various examples of electric motors and control equipments demonstrated the latest developments in driving papermaking and printing machinery.

A variable-speed motor of the polyphase alternating-current commutator type, as developed by this company, was shown complete with push-button stations giving " stop," " creep," " on " and " off " control in one case, and " raise speed " and " lower speed " on the other hand, hand-operated controllers with their wasteful resistances being dispensed with entirely. These equipments, which are representative of many in successful operation, allow of the most delicate speed control over a range of 3 or 4 to one, any speed within this range being obtained at high efficiency and with a good power factor.

Owing to the remarkably smooth acceleration from " creeping speed " to " printing speed " obtained under all conditions, " snatch " is eliminated, and wastage of paper further reduced as the low-speed period, during which faulty impressions are liable to be produced, is cut down to a minimum. At any setting the speed remains practically constant, however the load may vary, and the horse-power developed is directly proportional to the speed throughout the range. Should a greater speed range than that of 3 or 4 to one be required, this can be provided for.

The motor exhibited is rated at 25/8-h.p., 1400 to 1450 r.p.m., 400/450 volts., 50 cycles, three-phase. It is fitted with a pilot motor, operated by the push buttons, to effect the speed variation, which is obtained by movement of the brush system. In some cases the pilot motor may be dispensed with and the speed variation obtained through the medium of a handwheel.

There are exhibited also other examples of B.T.H. motors for alternating and direct-current circuit, and several control equipments. These include face-plate and drum-type motor starters, of the latest design, and alternating and direct-current circuits. They combine many important features, and are made for wall or floor mounting.

The Debecey Wholesale and Manufacturing Co., of London, Manchester, and Oldbury (Worc.) were here. The Debecey is, I think, the largest house manufacturing drapers' and grocers' books, café and restaurant pads and the like, and working solely through the trade. I have had a little knowledge of this concern for a dozen years, and have been greatly impressed with the remarkable business power and business probity and idealism actuating all its operations. I am very sure that no printer availing himself of the Debecey highly specialised plant for counter-check books and such things out of the way of the ordinary printer, need harbour the slightest misgivings as to whether any member of the Debecey staff will ever dishonour its traditions by the very slightest abuse of confidence. " Whatever records leap to light, they never shall be shamed."

On the stand of Messrs. Fry's Metal Foundry, rotary stereotype plates from almost every daily newspaper show what a predominant place Fry's have won in this field. We saw, too, formes composed of type from 6 to 48-pt. rules and ornaments, all cast on the Monotype machine; slugs produced by the Linotype, Intertype, Typograph and Ludlow machines; and flat stereo plates which show no visble signs of wear after 200,000 runs. The scientific methods used in the production of "Fryotype " quality printing metals were illustrated by a miniature chemical laboratory at which rapid analyses of metals were continuously made. One could learn many things at the stand—why, for

instance, Linotype metal will not cast a good stereo plate, and why a small trace of an impurity perhaps less than a tenth of one per cent.—will entirely spoil a metal. Many know that these things are so, but the reasons are interesting when illustrated by photographs of great magnification.

Regular assays of their customers' metal are made by Fry's quite free of charge, and expert advice can then be given if the metal requires to be "revived," "fluxed," or otherwise brought up to standard. The greatest novelty on this stand was Fry's Dross Container, two patterns of which were shown, one for use with a sack, and the other which required no sack, and which is used where dross can be collected by road. The Home Office, the J.I.C., and the trade unions have shown much interest in this container—a simple, effective device to ward off lead-poisoning. Now that these containers are available there is no excuse for printers' dross being on the floor or in open boxes or in any way contaminating the air of the printing office in the slightest degree.

It should be added that on the stand of the Lanston Monotype Corporation was a 16-page forme of Mono. metal cast from standard "Frytoype" metal which had stood up to a run of 555,000. This is believed to be a record.

Bristol is fairly on its mettle to live up to its old fame. When Charles I. was fooling with his unconstitutional "ship money" tax, he called on Bristol to pay about twenty-five times as much as the little port of Liverpool. Capper Pass & Sons unite with the Robinsons and the Bennetts and the Wills's and the Budgetts to keep Bristol to the fore. Here we saw Pass printing metals exhibited for any who were competent to examine their make intelligently. They are smelted and refined entirely by the Pass firm. Their Chempur tin they claim is the purest tin supplied. The firm has an enormous market quite apart from any printing requirements. I suppose printers are a kind of bye-Pass in comparison with the main avenue on which this firm progresses.

Algraphy, Ltd., are of Peckham Rye, and they pack 'em right; they send you rolled and selected sheets of aluminium and zinc for offset and all litho purposes, and you can get from them also their Alco rubber blankets. I can quite believe that the maintenance of uniform thickness of rubber blankets is far from being the easiest job in the world, but anyhow they are equal to it. The great advance of offset, I should say, is in no slight degree due to the excellence of these plates, with which I for one have been familiar for very many years.

At Stand 14 in the Entrance Hall, the stand bore the name F. W. Bridges, Ltd. It ought to have a description in keeping with the rest. What can I say? Well, the F. W. Bridges is a remarkable combination machine, featured by an internal combustion engine of great power. I may be mixing up power, plant and mechanical movement, but I think I should go on to say that differential gear is embodied in the F. W. Bridges, so that whatever the particular task and the specific driving force and driving connection needed, instant automatic and adequate adjustment is made. Then the F. W. Bridges is like the high-speed Miller on the Lanston Monotype stand—the Bridges is in three parts, instantly separable, but also instantly capable of being brought together as one working unit. Each of the three parts, Senior or Juniors, is supplied with automatic self-feeding apparatus——

But at this point I can see the Editor's deleting pencil rearing itself on end and looking blue.

So I think I will simply hasten to add respecting the triple-expansion F. W. Bridges machine that the Senior Auto and the Two Junior Autos are severally equal to each other, and that the combined Bridges machine is equal to anything!

Altogether the F. W. Bridges was one of the most interesting exhibits in the Hall.

W. Notting, Ltd., were there with their special adaptations for case-room supply, including fine imposing surfaces and admirable mounting systems with very intriguing gadgety vertical wheels for tightening your lock-up. You hand-run a ratchet over these wheels. Notting's grooved mounting beds are so good that they provide about the only instance in which I cannot wish to see a good old firm get out of their grooves. Nottings have a fine contrivance for tilting an imposing surface (unmounted) with a heavy forme on that surface, duly secured, and running the forme about the floor, as needed, on runners. It makes light work of heavy work.

Incidentally, I note that our good friends F. T. Wimble & Co., of Sydney, are their agents. Greetings to Wimbles. I wish they would come home; I should like to see them.

Our good old firm is younger than ever, Messrs. Harrilds told me. Horton Harrild has been a famous name with me and a famous personality of my printing craft life. It is quite good to think of a number of men who are wearing the crown of honourable age to the pleasure of their associates, of their home folk, and of all of us in the craft, Horton-Harrild notably among them. He may not see this, but will some of his business house convey to him our fraternal or our filial greetings?

Harrilds are very strong with their improved Bremner, of which thousands are in use all over the world, and their heavy art platen for three-colour and monochrome process.

To put in one of their self-inking presses is about the shrewdest thing that a house of any size can do. Their Universal Proof Press is made in demy and in royal, and five different styles. Their double-crown speedy self-inking press with rigid and adjustable bed and geared inking is made in five sizes up to quad-demy. They showed a 30 in. rotary perforator which also slits and creases.

Messrs. Harrild devoted one stand entirely to their Automatic Rapid (latest self-feed) two-revolution press, double royal, but equal to quad crown, with slight adjustment. The ink distribution is worthy of note, rollers $3\frac{1}{2}$ in. in diameter. As to the feeding, paper can be efficiently handled from thin manifold to heavy art stock. Speed 3,500 per hour. Or it can be hand-fed when required.

A feature of Harrild's "Bremner" platen, for general work, is the massive design and the fine strong gears. Harrild's heavy Art Platen, which was seen here, is similar to previous models, but some outstanding features can be found in the heavy gear at either side of the platen, the patent cam rotary motion to roller carriage, and the super-inking and exceptionally fine distribution and forme rolling power. Another section of their exhibit was an extensive show of bookbinding and stereo plant. The bookbinding and auxiliary plant included an automatic, folding

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box, glueing machine. This machine is claimed to be the fastest of its kind on the market, and is fitted with an automatic feeder of special design. A good feature is the simple lay-out and the easy accessibility and facility for quick adjustment.

It was good to see the postage perforating machine which Harrild & Sons have brought out. This was an entirely new exhibit. Few things in printing are more delicate and challenging than the problem of the perforator. You can mask many faults, but you cannot conceal the fact that you have struck holes through a stamp if your register is really defective. I examined this perforator with interest and admiration. It is always so good to see a firm which has shown and continues to show a great variety of service by way of machinery and equipment, unwilling to rest upon its laurels, but going out to meet every problem that in any way connects with its main service.

Harrild's 42 in. double-gear self-clamping guillotine was a convincing achievement.

The newspaper owner was well catered for in this Exhibition.

On Messrs. R. Hoe's stand in the Gillbey Hall one saw a printing unit of a rotary newspaper printing machine made for The Daily Sketch. It showed the vital parts in the patent ink pump system. The usual duct is replaced by what is termed a pump rail. Ink is led to the distribution cylinder through copper pipes, and reaches the cylinder through apertures placed equidistant at every column width along the pump rail.

The ink pump is gear-driven, direct off machine; thus it will be seen that the flow of ink to the distributing roller is proportional to the speed of the machine, and not simply to time. This is clearly a great advantage over the duct system, inasmuch as when the press is speeded up no adjustment is required to regulate the flow of ink. The common practice in modern newspaper press rooms where ducts are used is not to send out to the public any of the newspapers printed before the press has gained full speed. With pumps the first copies are as good as any, and of course an important economy is thus effected. A feature is that all adjustment is done from the outside of the main frames, thus eliminating any danger to minders adjusting the keys in the ducts. This method makes for cleanliness, and considerable handling labour is saved.

Another Hoe improvement worthy of note concerns the lifting of the rollers from off the cylinders. It is now possible to lift all rollers by turning a handle through a quadrant of a circle.

Linotype Machinery, Ltd., showed a new smaller Auto Plate Caster, intended for those who do not absolutely need that wonderful auto, which produces three perfect cylinder plates per minute. That was particularly an exhibit for the newspaper man. The machine casts, bores, cuts the tail, trims and cools semi-cylindrical stereo plates ready for the press cylinders. It consists of a vertical casting box, horizontal boring rod, tail cutter and trimmer, and a cooling apparatus.

The Winkler Company, of Switzerland, showed their vertical auto-caster, and though they declared that the water arrangements in the Hall hardly enabled them to do what they would like, they certainly obtained very striking results in speed and in the apparent good quality of the plates.

Hard by stood the Cossar printing machine, shown by Dawson, Payne & Elliott, of Otley. There was a great display of names of newspapers which have adopted the Cossar. Personally, I encounter it all over the country, and have yet to hear the first thing unfavourable to it from any works in which it is installed. A newspaper that has attained even a 15,000 steady circulation, with good prospect of increasing this, cannot, it seems to me, do better than instal a Cossar.

Some brief points about the Cossar are: Its speed, 4,000 an hour, which begin to be printed the moment your last forme is locked up, the paper rising vertically from the duct straight in view of the minder, who can make any needed ink adjustments instantly; and good halftone work produced with 120 screen (though I think Mr. Craske, who was so successful in the Hall in showing how to get an appearance of 150 line when using only 100 line, could help the Cossar makers to go even better in this respect).

Model " B " Cossar prints, 4, 6 or 8 pages in one operation. If 10 or 12 are wanted extra pages are obtained by printing the extra pages first and re-reeling.

The " B 16 " Cossar is like the Model " B," and works similarly, but accommodates a 4-page width. The cylinders run in an enclosed bath, with bearers geared at each end with the rack. Quite a lot of good jobbing is done on the Cossar. A Cossar 24-page magazine press is daily printing a certain Stock Exchange list.

In the Main Hall Messrs. Crabtree (Leeds) showed, so far as one could show in such an exhibition, what they have given to the daily newspaper world in the form of their fine rotaries. I have personally encountered the Crabtree newspaper rotaries in the offices of those shrewd buyers, the proprietors of The Scotsman and The Edinburgh Evening News. There is perhaps not a more striking instance to be observed of a British firm rising daringly, shrewdly, and effectively to meet exacting requirements than this instance of the vigorous and powerful incoming into the rotary newspaper field of the Crabtrees, of Leeds and London. More power to their elbows—human and mechanical.

Messrs. the Swedish General Electric Co. were exhibiting several motors and gear suitable for driving newspaper presses and printing machinery. Their exhibits included a K type D.C. shunt wound interpole variable speed motor with semi-automatic control gear. This motor is run from a push-button station, and can be inched. A speed range of 50 per cent. by shunt or economical regulation can be obtained with this control. Then I noted a K.I. one-h.p. shunt wound D.C. motor giving 1,150 revolutions per minute at 200 volts. This motor is suitable for independent-drive machines. There was also a type K ¾-h.p. compound wound direct-current motor. The motor is for 110-120 volt circuits, and the winding is sufficiently heavy to warrant it being started up with merely a double pole switch. Also an M.K. type three-phase induction motor, with slip ring rotor, which has been especially designed for press work in that in its design it has been afforded a measure of protection against ink, oil, and other foreign matter in the windings. I noted, too, an A.S. type single-phase automatic starting induction motor. The winding of this machine is very heavily built, and it can be thrown straight on to the line by means of a triple pole switch. It develops full

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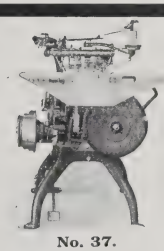

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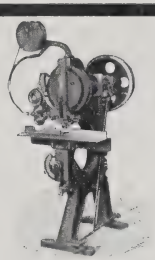

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load current at starting, and after the rotor voltage is constant. This is well suited for automatic or remote control. There was, too, an S type single-phase variable-speed commutator motor. A sufficient speed for driving flat-bed presses is possible with this type of motor, and the equipment is a new departure in the driving of presses with A.C. single-phase current supply. Speed variation is accomplished by shifting the position of the brushes, and this can be attained by a handwheel placed alongside the laying-on board or in any other convenient position. Also an R.S. type single-phase self-starting repulsion induction motor in which the starting torque is two and a half times the full load torque when the motor is switched direct on top line. Also a type R.S.1½ ¼-h.p. Century single-phase self-starting repulsion induction motor. This machine is similar to the foregoing, but is fitted with commutated rotor and brush gear. Also a 30 Kilo-Volt-Ampere three-phase oil-immersed self-cooled transformer wound for a line voltage of 3,460, with an output of 415 volts.

A motor generator set was shown; a type K 9 D.C. shunt-wound interpole motor direct-coupled to a type G 7 three-phase alternator giving 15 K.V.A. 400 volts at 100 revolutions per minute with a direct-coupled exciter. An interesting point to note is that the generator set was converting 200-volt D.C. current obtained from the exhibition authorities into three-phase current to supply one of the firm's E.S. type variable-speed three-phase commutator motors which was driving a roll press on the stand of the Victory-Kidder Co. in the Gilbey Hall.

Although this is a Swedish firm, it is amalgamated with Messrs. Fullers, those well-known makers of the Fuller block accumulator.

Messrs. Witton James were exhibiting a large press-driving motor with accessory switchgear and other incidental electrical equipment for newspaper offices. The rotary press-driving motor was constructed with a preliminary drive incher motor. This motor is of small horse-power in comparison with the drive motor. Its function is to turn the press over at slow speeds at the beginning of a run, gradually accelerating until the speed is sufficient for the large motor to take up the drive. This is effected by coupling the smaller motor, which is of constant speed, through a worm reduction gear, to the shaft of the main motor, and through a flexible ratchet coupling. Thus the small motor's revolutions are 1,000 per minute, and this is geared down to the main motor shaft at a speed proportional to the number of teeth on the worm wheel.

Let us say that there are 36 teeth on the worm wheel, then the speed of the main shaft will be 1000/36, or nearly 28 revolutions per minute. Now when the small motor has turned over the press to start, the large motor gradually takes the load, working up from the 28 revs. per minute to something in the region of a thousand. The smaller motor now runs out by means of a slipping ratchet clutch similar to the starting-handle clutch on a motor-car, and with the full load on the starting switch is cut out of circuit. Naturally, this automatic start requires a considerable amount of switchgear, looking rather complicated, but really easy and foolproof. Control is effected from a push-button box with five positive pushes. Thus the minder cannot overrun his press at the start. The switchboard itself can be erected at any distance from the press. This provides remote control in which, if button boxes be erected in every deck, the press can be run from several points.

Working in conjunction with this is an automatic "Safety First" apparatus. This gives warning by both sight and sound, buzzer and lamp, that the press is about to start, and allows a specified time after the warning is given, which time can be fixed according to adjustment of a switch before the press starts. A point worth mentioning here is that the time switch has an automatic quick run-back. That is to say, after the press has started the switch immediately sets itself back for another start should it be needed then. This is useful for test runs and adjustment of the paper web when starting up, as it saves seconds. The equipment consists of a positively motor-driven contacting device with incidental switchgear and interlocking switchgear, so that it can be adaptable to the push-button control box and board of a press. It is interesting to note in this connection that the press-driving set is practically standard equipment in all large newspaper offices, which in itself is testimony to its reliability and use. Messrs. Witton James's representative spoke with some pride on the completeness of the driving unit, and I gathered that it was practically the outcome of and a great improvement on the original "Holmes Clatworthy" system.

Another exhibit of considerable interest which in the near future should be standard in newspaper offices is the unit braking system. In this an electro-dynamic brake is attached to the shaft of each impression cylinder, and contrary to the old method (where the simple dynamic brake fades away as the speed of the combination falls), this new double braking ensures that a minimum brake torque is applied at maximum speeds, and a maximum torque is applied as the press is brought to rest. When the press is at rest, the brake automatically lifts. Each electro-magnetic brake consists of two members with an energising coil, one keyed to an extension of the cylinder shaft, the other carried on a cast-iron bracket footed to the machine frame side, the combination forming a concentric unit with the cylinder. The whole is automatically regulated, and effective brake torque increases as the speed falls. This is effected by means of a small electro-dynamic machine geared to each press, or any number of units, independently with the most simple switchgear.

In addition to this several other small equipments have been shown, namely, two 5-h.p. equipments, one each for A.C. and D.C. for the driving of small jobbing and bill presses, each consisting of a variable-speed motor, with positive motor-driven automatic controller, with button control; a 6-h.p. equipment suitable for matrix mangle driving, and a reel hoist driving outfit with underwind and overwind limit switches.

Messrs. Witton James seem to have exploited electrics for the benefit of the newspaper owner to their fullest extent, and no doubt their enviable position among manufacturers is well deserved.

Messrs. J. H. Holmes & Co., Portland Road, Newcastle-on-Tyne, manufacturing electrical engineers, specialise in the electric driving of printing machines, and their main exhibit consisted of a model of the Holmes-Clatworthy two-motor equipment for driving rotary web printing presses, which enables machinery to be started smoothly from rest and to evenly increase to full speed without paper breakages. In conjunction with this a full-sized automatic controller was shown entirely controlled

by push buttons, which illustrates the very latest improvements and refinements for rotary presses. Other interesting exhibits included small direct and alternating current motors and switchgear; resistances for printing press controllers, and a photographic display of various equipments which have been manufactured by this firm.

Valters Jackson, as the craft well knows, make a great many of the small-size machines indispensable to houses producing what may be compendiously called "system" issues, and to those who undertake account-book making, open ruling and the like. Their machines include loose-leaf and card-index punchers, creasers, tab cutters, the Sterling round cornerer (which I seem to find everywhere I go), the Monopol thread book sewer, and the Brissard disc ruler.

The Valters Jackson metal hold-fast hangers (for paper drying or seasoning) are simple in operation, being quite automatic in the grip of the paper. This is effected by a pinned tongue which is held by gravity on to the edge of the paper. Each link will hold as many as about 50 sheets. The greater the weight of the paper, the stronger the grip. Paper hanging makes for perfect seasoning, which contributes to dead register in colour work. And the hangers save your floor space.

John Ratcliffe & Sons, Leeds, showed a demy size high-speed rotary offset machine, the main features of which are its simplicity and easy accessibility. The machine is composed of three equal sized cylinders. The plate cylinder is fitted with an ink slab. The whole machine is automatic in its action, and is fitted with a receding pile delivery. It is capable of printing 3,500 sheets per hour.

A double demy tin plate printing machine, similar in its construction to the offset machine, was also shown. It is specially built for rapid high-class tin printing. The speed of this machine is only limited by the capacity of the feeder, which may be up to 2,000 per hour. I am assured that a great many of these machines are working, and doing fine work. I have encountered Ratcliffe machines all over the country for many years.

At the stand of Messrs. Hartmann Bros., Ltd., Lyngby (near Copenhagen), Denmark, was seen a complete modern paper bag manufactory at work, comprising the necessary principal and auxiliary machines for the making and printing of the most-used kinds of paper bags. The installation included the "Reformator," a patented flat bag and satchel-making one-operator machine, model 1925, with printing attachment. This machine manufactures perfectly-made and printed flat bags and satchels in one and the same operation, and is provided with an automatic delivery and counting device. The bags can be printed on one side or both sides and in one or two colours. Bag sizes: Length of tube from $4\frac{1}{4}$ in. to $14\frac{6}{8}$ in., and width of tube from $7\frac{1}{2}$ in. to $20\frac{3}{8}$ in. The output per hour is up to 20,000 printed bags.

One also saw the "Precision," a patent block bottom bag-making machine, Model 1925. This machine produces block-bottom bags, lined or unlined, and is provided with an automatic delivery and counting device. It can be supplied with a regulating arrangement for the making of bags from previously printed reels. Bag sizes: Length of tube from $5\frac{1}{2}$ in. to $13\frac{3}{4}$ in., and width of tube from 3 in. to $8\frac{1}{4}$ in. The output up to 6,000 bags per hour.

Again there was the patented high-speed Hartmann press for the printing of finished bags, Model 1925. Printing surface: maximum width $15\frac{3}{4}$in. and maximum length $19\frac{3}{4}$ in. output from 4,000 to 5,000 prints per hour. It performs the work of four platen presses. And there was a new automatic bag stringing machine, and various other auxiliary machines for bag making. All these machines are patented in the principal countries.

Well, Danish kings conquered a lot of our territory once; and a Danish princess conquered us all in 1863. Her chariot is just driving through London this Alexandra Rose Day, and we are all slaves roped to that chariot. It's quite in order for this Danish firm to come offering their service and challenging our wits.

No one ought to knock up through overwork, which could be eased by the Auto Knock Up, supplied by the Auto-Knockups Company, of Reading. It is designed to get through given work on one-third of the hand labour time; it is adapted for all sizes up to 60 in. x 40 in. Being a unit machine, it will handle the knocking up of several presses.

The action of the Auto-Knockup machine consists in blowing the paper at its back edge, and at the same time jogging it. The paper is then passed by hand to the other side of the machine, and a jogging attachment finishes the operation by piling the sheets with edges in dead register.

It is possible by a simple adjustment to enable two operators to work the machine and double the output.

Messrs. Ullmer, the well-known printers' engineers, this year attain their centenary.

Everything that the case room requires is in the Ullmer way. A really "imposing" show seems to be the fit word description, as it is a matter of imposing surfaces, cabinets, frames, labour-saving furniture, and the rest, of which we are talking. Their 24 in. rotary cutter and 20 in. and 12 in. lever cutting machines naturally have a place.

I note the little Cylplat, which was in the 1910 exhibition; its 3,600 speed; its good automatic side-lay action; its counting apparatus for fifties. A good Caslon line.

The Hacker plate gauge and rectifier is a great Caslon talking point, with its means of showing whether your plate is 14-1,000ths or 8-1,000ths, or whatever it may be, out of type height.

I was particularly glad to see David Carlaw & Son, of Glasgow, albeit this time exhibiting only one of the many things with which we associate the name of the famous Finieston Street Works. Carlaws we know as makers of all kinds of numerical machines, and of pagers and like accessories of the main printing operations. We saw at the Hall Carlaw's entirely new high-speed envelope folder and gumming machine. The machine is built on the Leader principle, but runs at a much higher speed than can be obtained on any other machine of similar construction. It produces 185 perfectly folded and gummed envelopes per minute. Any size between $6\frac{1}{2}$ in. x $3\frac{7}{8}$ in. and $4\frac{1}{8}$ in. x 3 in. can be made on the same machine. In the terms of what it will do, the machine appears to be an exceedingly cheap purchase, the first very reasonable cost soon showing itself to be relatively unimportant. The plunger drive is semi-rotary; it is not connected by a cam. The back gummer is driven by an eccentric. The machine has a greatly im-

proved delivery, which is entirely rotary, and does away with grippers. The retention of the wipe-off gummer ensures perfectly gummed flaps. Their London agents are Messrs. Dawson, Payne & Lockett, of Fetter Lane, London.

The "Vercyl" is a British-made vertical cylinder high-speed job printing press, brought out by Connoll & Coles, of Leather Lane, Holborn, and of Clerkenwell. Just as the Intertype claims to have affected like service to the Linotype after the elimination of a good many parts in an effort at simplification, so the "Vercyl" aims to accomplish the work of similar machines in somewhat simpler ways. It takes a crown folio job as against the foolscap folios of a foreign machine of the same kind. It has improved cylindrical instead of disc inking. All adjustments are made from the front of the press. The delivery is automatic, p.s.u., and in full view of the operator in front of the machine. It is claimed that perfect register is maintained at a speed of 2,250. The inking apparatus and swingboard swing clear for easy access to forme and cylinder. The machine is manned by the Platen Society under their trade union rules.

The exhibit of inks included those shown by Messrs. Dane & Co., of Shoe Lane, E.C. They showed various pictures printed for and exhibited at the Paris Exhibition close on fifty years ago, when they were awarded a diploma. One saw collections of books and posters printed with Dane inks seventy-five to fifty years ago, and still bright as on the day they were produced.

A hundred and seventy years of ink making is a challenge which Blackwell & Co., of Dyers' Buildings, Holborn, are able to put out. I believe Blackwells long ago secured very important contracts for supplying printing ink to The Times. They do not say so in any printed notice that I see, but it is a strong impression of mine. They are the oldest ink-makers in the Empire. They showed at the Hall methods of testing for fastness of light.

The Faryndon Foundry, of 56, Turnmill Street, E.C., showed their type in a Main Hall stand. They are otherwise, I believe, the Universal Type Casting Co., Ltd. Faryndon is quite a good name, being so specially connected with printing. The Farringdon Ward in the City of London is called "the Ward of the world, the flesh, and the devil": the world because of the newspaper and printing offices so abounding therein, the flesh because it comprehends Smithfield Meat Market, and the devil because it includes the lawyers of the Temple.

The Faryndon Foundry (or the Universal Type Casting Co.) showed two typecasting machines turning customers' old and battered type into new and up-to-date faces.

Garratt & Atkinson, of the Warwick Works, Ealing, W., were strong in line colour and two, three and four halftone colour process, and in artists' work necessary to really do justice to three and four colour. If only customers could know how much better illustration they could secure from their engravers if they would but let the engraver be their adviser to a greater extent, and would but supply him with better subjects, or allow him by his own improvements on their originals, to supply them to himself!

The Nickeloid telegraphic address, I note, is "Necorey," which sounds quite a happy word to those who have any acquaintance with its nickeloid, with its electrotyping (done by special processes which in the first instance laid the firm's foundation), and with Mr. J. A. Corey, who through twenty-five years has built this business up from its inception to the great scale upon which it now operates.

The company has had an advantage from first to last in that there was not a process nor a section of any process which Mr. Corey was not equal to performing with his own hands if it were worth while. His is a singular combination of a fertile brain (what Robbie Burns calls a "barmy noddle workin' prime") with the practicality of one who in earlier years was a dexterous manual worker in the processes, and even, I think, has continued to do no small amount of hand work on occasion in methods of research and in the establishment of new departures for the greater service of the firm's customers.

I don't know whether Scotland Yard have been told, but Messrs. F. E. Brown & Co., of Leicester, are prepared to screen any villain! Before, however, the Court passes sentence, it might be made clear that the screening is only to be done in process engraving and through their Diamond engraved screens which they (the sole makers of process screens in Great Britain) have for many years been supplying to engravers. I am constantly encountering the Brown screens in engraving establishments, and wish I encountered them still more often. More power to their rulings, whether for ordinary halftone or gravure.

I am very sorry to record that they had intended to occupy a stand with a full range of screens, but, owing to a recent disastrous fire at their works, they were obliged to confine themselves to a small case of specimens.

The halftone screen, by the way, offers one of the most interesting problems in insurance valuation. It may seem to the uninitiated such a little thing to represent a great many pounds. Again, a screen, if it has not "run-in" at the edge (and they might be all aluminium bound), and if it has sustained no scratches or other serious injury, hardly depreciates at all through many years because its serviceableness remains practically unchanged.

Greigs, of Edinburgh, were there with their 1925 models of 42 in. new Conqueror; their rotary perforator, and a 44 in. rotary cutter. The rotary is of entirely new design, unlike anything on the market. Greigs are Conquerors; and we who from experience assent to the justice of the claims they make—we are concurrers.

Kodaline, the Kodak negative paper, was shown in a Gallery stand, and one's attention was called to a 60 by 40 film negative and print and other things of much interest. What a story is that of Kodak and of its founder, Mr. Eastman! He was a bank clerk whose hobby was photography. He used to come to the bank with his fingers stained. This was rather unpleasing to a young lady clerk who worked by his side. The result was that the manager warned him that he would either have to give up his experiments or his place at the bank. He gave up his place at the bank. In due time he built up the great Kodak business. He came to England a year or two ago to capture my good friend, Dr. Kenneth Mees. Dr. Mees, though

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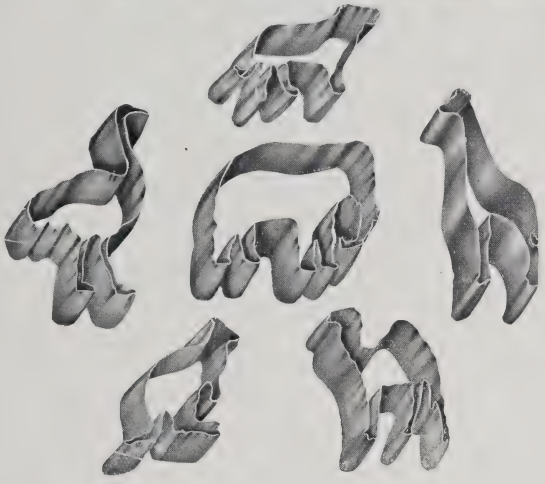

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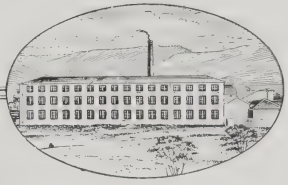

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young, had just become a very much appreciated director of Messrs. Wratten & Wainwright, of Croydon, and even the call of Mr. Eastman could not make him feel that he could relinquish his position. "Very well," said Mr. Eastman, "I will see if I can buy Wratten & Wainwright." He did so, and Dr. Mees is head of the Kodak laboratory. Mr. Eastman spends many thousands a year in research work for the strengthening of his photographic business.

Messrs. Timson & Bullock (Finsbury Square, London) showed their rotary tin-printing machines. They have of late made many valuable improvements to their numerous constructions. During the years that have elapsed since the last exhibition small jobbing rotaries have commenced to come into their own, and Messrs. Timson, Bullock & Barber exhibited, in addition to other types, one of their "Combined" type "Efficiency" machines, specially designed for jobbing and similar work. This particular rotary press might well be called a composite machine; its output compared with flat-bed machines is prodigious. Single- or multi-colour printing and perfecting are among its everyday capabilities, and when other features are required, owing to its special equipment, auxiliary units, such as folding, perforating and numbering, can be brought into use. It works from a web, and as the printed product leaves the press it is cut into sheets. A small machine will turn out 24,000 folded octavo forms per hour.

Another valuable machine shown was this firm's Rotary Counter Check Book Machine. Recently a new type has been introduced, embracing the last word in rotary printing improvements, and users or prospective purchasers of check book machines would do well to see this press in operation.

Last, but not least, is a Rotary "All-Size" Machine, printing and re-winding. This press is arranged to print one or two colours, and owing to special devices, the printing distances can be varied, thereby eliminating an old objection to rotary printing and re-winding machines.

Sheffield has been so hard hit that it is a special pleasure to call attention to the products of the Simplex Machine Co., Ltd., of Granville Works, Sheffield. Among their 1925 models shown was their universal rotary perforator and interleaver, and their rotary Bowns edge gummer. In addition to this at their stand in the Main Hall were their guillotine knives and circular cutters, which certainly should be all right—coming from Sheffield. Their drying ovens were also a feature to note.

On the Sheridan stand I was glad once again to encounter Miss Lawson. "She stoops to conquer," as the founder of the firm (?) wrote in one of his pre-existences. She certainly conquered me some years ago in the sense of compelling my admiration of her knowledge of the ingenious machines by which T. W. & C. B. Sheridan have so variously empowered the craft. Here we saw the Dexter Standardised Book and Jobbing Folder (with Cross Feeder), with its 4,200 sheets per hour, and the Dexter Stitcher, with speed of 160 to 240 staples per minute, with two stitcher heads, or twice the speed with four heads. An incorrect book is automatically diverted out of the regular channel.

Besides these Dexters, the dexterous Miss Lawson and other dexterous assistants showed their oversewing machine and the special scorer connected with it, and the New Model Paper Cutter, which automatically varies the clamping power to suit any job; the Sheridan 4B Blocker, which works at the speed of a printing press, with no sizing, no laying on, and no brushing off required; the Booth Round Corner Turning-in machine, and the Bunn Package Tyer.

What interested callers I daresay even more was the large print of the remarkable machine which I think is at work in the Greycaine Works, of which Hall Caine's son is a director, with its many stations for printing and collating book sheets, and preparing them to present their cut-off back edges to be glued and cased. Selfridges and Woolworths sell these rapidly produced little "Reader" volumes. I fancy they alone sell them at present at any rate.

All classes of inks and dry colours were shown by Messrs. Stoer Bros. & Coles, of London.

Inks and Parker plates, and a simple effective graining machine were the feature of the Frank Horsell (Leeds) stand.

Messrs. J. B. Stone (Finsbury Pavement) showed their "Wilson" Patent Nibbling Machines for rapid metal cutting, and their Alligator belt fasteners; and Nicholson & Clipper (Salford) their Klincha lever belt lacing machine, belt cutters, etc.

The Dalziel Foundry are always great exhibition supporters. They showed, of course, their Dalziel stereo flat or rotary, their Dalziel process engravings in line, halftone, and three and four colours, and Dalziel stereos from these colour plates and their Parker Patent Mounting Boards and Dalziel Patent Register Finder. Sheets demonstrating the results obtained by this system were exhibited.

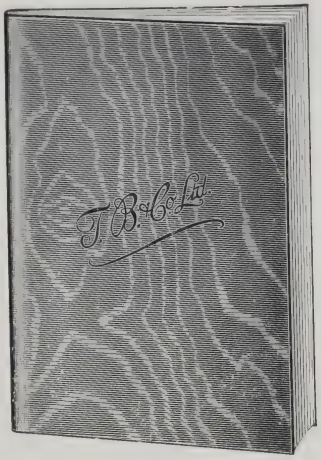
Since the last exhibition in 1921, extensive additions have been made to the process department at 19-25, Earl Street, Finsbury, to deal with the increasing demand for Dalziel process blocks, and attention is also drawn to the facilities of the new fully-equipped foundry at 5-7, Marsh Street, Ancoats, Manchester.

Woodroffs, of Turnmill Street, London, E.C.1, showed in operation an improved Gordon platen and other machines for printers or box makers, and a converted two-revolution press for cutting and creasing with a pile delivery attached. Woodroffs, by their enterprise (shown particularly in their intermittent lists of plant for disposal, with their charge against each machine) have put the whole craft in their debt.

Any size ordinary two-revolution can be dealt with by Woodruffs to cut and crease. The Babcock with its large cylinder they have also so converted. Wharfedales they can convert for the same purpose, but I think they will tell you that Wharfedales don't lend themselves so well to the change as two-revolutions.

Messrs. Hampson Bettridge had a big stand. Here we saw a fine No. 1 bag machine working from 3 in. to 11 in. wide with a two-colour printer, and up to 20,000 per hour with a new delivery. It is all on ball bearings. The bags can be strung right away and made ready for packing. The great Lyons firm were working a machine of this kind in the Exhibition.

Another bag machine Hampson Bettridge were showing was one for making pound bags from blanks. They showed a Brehmer type stitching machine made in this country in four sizes. One noticed, too, their self-inking cylinder proofing press; their rotary cutter specially for fine work;



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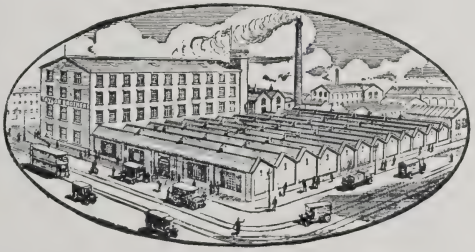

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and what seemed to me very cheap multiple loose-leaf punchers with self-contained adjustable punch units; their creasers; their tab cutters; their pagers and numberers; their perforators and corner rounders; their account book back formers; their hand or rotary bevellers; their indexers, drillers, benders; their auto striker rulers and disc rulers, with suction power feeder. This last they claim to be the quickest and best on the market.

They are also boxing champions—no, I am getting involved in the jargon of the ring. Pardon the slip; I mean they are makers of box machinery of all kinds; scoring with their scorers; cutting your costs with their corner cutters and cardboard cutters and hinge cutters; always aiming at originality. I note their "topping and bottoming" machines; and it will be enough to borrow their rounder to round off the paragraph, by the hint that you may safely go to them for anything you want from "top to bottom."

A John Shaw display was next door to Hampson Bettridge's, and here was a great super Imperial disc roller for feint lining and striking four colours on both sides of the sheets at one operation. Their ruling cylinders are 43¼ in. in circumference.

Mr. Joshua Bailey, the very alert director of Manifoldia, and the author of that racy, suggestive, and indeed philosophic book, "The Poor Printer," in one of his lighter moments invented the Bailey perforator attachment; and this you see on the Shaw machine.

A quadruple striker pen ruler was shown. One feature was a new design beam standard and fittings of extra firmness and rigidity.

British-made high-grade labour-saving machines for the paper-working trade were what Messrs. M. C. Ritchie, Ltd., of 145, Farringdon Road, London, displayed. There is no mistake about it, we have got to attend very specially to the carton and the paper-container business. Enterprising printers might very well buy the half-guinea book which my friend Verstone, of the Verstone Publishing Co., Ludgate Hill, the proprietor of The Paper Container, has very laboriously compiled. It is abundantly illustrated; and if they are induced to increase the range of their services, and particularly to follow the modern trend which is towards the collapsible as distinct from the rigid box, they may then well note the various British products represented by Messrs. Ritchie.

These included an automatic folding box gluer; Robinson's double cutter and scorer working 45 in. by 45 in.; and the quite novel double ending-on machine (24 square inches). I think the American patent for this has just been secured. It is, I am assured, our speediest machine; it is equal to forty boxes a minute. It is an entirely new machine, the only one of its particular class.

There were 6 in. corner staying machines. An ending-on machine has very special fingerguards to prevent any accident. The 5 in. binding machines, again, are the speediest anywhere to be seen, working to 3½ gross boxes per hour. The 5 in. edging, stripping and lacing machines, working with the foregoing, will edge and lace in one operation. Another new machine is the double-corner cutter for paper or cardboard, adjustable to 24 in. wide, and down to 4½ in. deep. Two corners in one operation. I may mention the topping and banding machine for banding boxes to 3 ft.

Messrs. Ritchie had about twenty other machines which they would have liked to have shown, but simply could not in the space available, considerable though that was.

Main features of the famous Furnival firm's display were one quad-demy two-colour offset press, fitted with printed-side-up delivery, with pile delivery arrangement built in machine, without increasing floor space; a double-demy single-colour rotary offset press; a demy size rotary offset press, specially built to suit small jobbing offices and suitable for long and short runs; a quad-crown direct rotary litho machine; and a quad-demy two-revolution press, with new patent bed motion and p.s.u. delivery; speed 2,200 impressions per hour. They showed their latest improved double-demy Wharfedale printing machine, fitted with new patent p.s.u. sheet delivery, with auto-check to ink cylinder sheet, adjuster on delivery table, automatic side lay and automatic check to the printing cylinder. There was also a double-demy drum cylinder cutting and creasing press and a 38 in. patent Express self-clamp guillotine, with self-contained hydraulic clamping motion; and a quad-crown Mark Smith's patent safety cylinder Vacuum bronzing machine. All the machines were driven by independent motors by Electromotors, Ltd., Manchester.

How printers might cast their own type and hire matrices, including apparently the hiring of nickel matrices made by a special process, was set forth by the well-known Williams Engineering Co., of Julien Road, Northfields, Ealing. The type range is 6-point to 72-point.

I have seen lately more than one large installation of Baker Sales all-steel composing-room equipment in provincial printing works. I found the proprietors were enthusiastic about it. In one case plant that seemed to have years of good service was put out to make room for it. At the Exhibition attention was invited by the Baker Sales Co. to this steel-case plant, and to the company's "unit system," its galley storage system and galleys, and to its Vandercook proof presses.

Those centenarians, Vincent Brooks, Day & Son, of Parker Street, Kingsway, London, have been showing. This historic litho house once carried through a war on its own—against Austria. At any rate it was charged in our courts with so doing. It litho'd paper money for the noble Hungarian hero, Kossuth, in 1848. The British Government prosecuted Vincent Brooks for "levying war upon a friendly monarch," the then young Emperor of Austria, by dint of the note printing. All the notes they printed for Kossuth were ordered to be destroyed, and the Bank of England was ordered to witness and attest the actual destruction. There was a report (probably unfounded) that Louis Napoleon—at that time living in London—actually paid Vincent Brooks for the notes thus printed. Public sympathy was entirely with Vincent Brooks & Day (or Day & Son, as I think it was then called).

Just a memory note—as it occurs.

It is very good to find that this grand old firm was never more vigorous, never busier, and, I am confident, never turning out more splendid work than to-day.

I ran across my guide, philosopher and friend, R. B. Fishenden, in the gallery. I never meet him but I learn something, generally about type or gravure. He would have me take stock of the machine colour gravures called "Ponto-

prints," by Messrs. G. & G. Ponton, of Cathedral Street, Glasgow. There is no screen visible in their gravure. The Ponton gravure give us soft, mellow, continuous tones, preserving for us that undertone which gives its distinctive character to monochrome gravure. Their work can be done on matt paper, and with ink which dries without a gloss, and the stereoscopic effect so appealing to us all is well achieved. It is splendid work.

This is mainly an exhibition by machine makers, and not exactly a printing exhibition; and yet, truth to tell, those who had eyes to see, could find delightful specimens of fine printing if they kept their eyes open, and those eyes were sufficiently trained. The specimens shown by the London School of Printing were remarkably varied in everything but quality, which was fine throughout. No wonder America and Germany have both asked for the loan of these fine achievements by our rising hopes!

The good old Victory rotary makers are now the Victory Kidder Printing Machine Company, of New Bridge Street, London, and of Birkenhead. Their deeply interesting exhibits included a two-colour roll product press of the vertical type, designed to print in one or two colours at will. A slitting and re-reeling machine, type "U," possesses many unique features, one of the most important being facilities for either slitting by means of shear or pressure cutters. The Kidder self-feed bed and platen printing press is constructed to print one or two colours to accurate register on one side of the paper web. The machine will take paper of a width up to a maximum of 20 in., and will feed and cut sheets in length from 3½ in. up to 14 in. in even stages of ⅛ in. The various operations are fully automatic, and the machine is particularly suitable for the economical production of large quantities of a very diverse range of product.

The Victory self-clamp guillotine is essentially a compact, efficient and simple machine, all complicated mechanisms having been purposely avoided. The patent oscillating metal melting furnace, again, is of particular interest to all stereotypers. Many attempts have been made hitherto to construct a melting pot from which the metal could be poured instead of having to use a ladle, but all these furnaces use a valve, which is apt to leak or otherwise. It does not employ a valve, the metal being poured by simply tilting the pot, and as the duct for conveying the metal from the pot to the orifice leads from the bottom of the pot, the poured metal is perfectly clean. All fumes from the furnace pass over the surface of the molten metal, and further protect it from the oxidising action of the air. The furnace is supplied in two sizes, having capacities of 150 lbs. and 600 lbs. of metal respectively. A steam platen press for drying matrices is a press specially suited to fill the requirements of general printers and stereotypers. Then the Victory offset press has been engaging the attention of the Victory-Kidder Printing Machine Co., Ltd., for some considerable time.

It is of distinctly novel design, and is destined to occupy a new position in the lithographic world, as it possesses most of the best characteristics of both the flat-bed and rotary machines, and is particularly suitable for the production of short-run work

Messrs. Oscar Friedheim showed their latest and up-to-date simplified book-sewing machine in various sizes, including entirely new models; and their improved thread stitching and knotting machine, new looping machine, and an entirely all-British cloth slitting and cross cutting machine. This last-named machine has an output far in excess of anything yet obtained. All parts are of British standard, and can be supplied at a greatly reduced cost. The slitting and cross cutting are guaranteed mathematically correct. The machine is fitted with appliances for slitting and cross cutting one part of the reel, and at the same time re-winding the remainder.

The M24 Printing Machine Co., Chorlton-cum-Hardy, Manchester, showed their M24 printing machine, claimed to be the fastest-running job press machine in the world. Making its debut first on the American market some twelve years ago, it has steadily forged its way until to-day nearly 12,000 presses have been sold. When the M24 automatic suction feed is attached to the press, an average production of 4,500 sheets per hour is obtained.

Some features of the Miehle Press (American Miehle's) stand were the famous vertical job press, immensely admired and well bought, I believe; the No. 4 four-roller fully-automatic press; and the Pony press. The Vertical is for 13½ by 19 and at 2,000 to 3,600. Completely automatic. The No. 4 four-roller, pile-fed, works up to 2,400, and to size 40 by 27.

Messrs. Vickers, Ltd., showed their new type corner staying and ending-on machine (driven by self-contained electric motor). Features of these machines are the special link motion and positively-operated paper gripper. These new departures eliminate the return and friction springs on the earlier models. Another machine was their well-known general-purpose box stitcher for all thicknesses, from zero to ¾ in., with automatic thickness setting. A new form of high-power corner cutter was also shown.

Mr. John T. Marshall marshalled his "Marshall" (improved Elliott) thread stitching, looping and stringing machine (the only British owned and built stitching and looping machine); a printing machine for envelopes ("Guy's" patent, the first time shown); printing on face or flap or on face *and* flap at one operation; it closes the flap after printing; and it serves for postcards; his printing attachment for envelopes ("Guy's" patent); "Marshall" case rounding machine, for rounding the backs of book cases prior to casing the book; the "Marshall" confetti making machine; a letter file creasing machine, for punching and creasing letter files, loose-leaf and index card folders; paging machine (treadle) with new and simplified locking device; index cutting machine (treadle); slot cutting machine (treadle and power), single and multiple, for cardboard box making; loose-leaf creasing machine (for hand or power), very simple and most effective; calendar rimming machine; bevelling machine (hand lever and rotary), for giving perfect bevel on strawboard, cardboard, etc.; deckle edge machine (hand lever); and round cornering machine (hand lever).

Lorilleux & Bolton, the ink makers, always make a fine, strong display. Their Frequentia colour testing lamp was shown. Twenty hours' exposure is equal to one month of bright sunshine. They showed many specimens of their ink printed in the ordinary course of customers' work. That's the Lorilleux & Bolton way—always practical and always thoughtful of the customer.

British-built folders were shown by the Canadian-American Machinery Co., of Farringdon Street, E.C. I noted their quad-crown British-built folder with its automatic suction feeder.

The double-demy Kelly was here, shown by the Canadian-American Co. Three thousand per hour, double-demy—think of it! But who that knows the Kelly does not admire; and covet, if he does not possess?

A Ledevil covering machine, of French manufacture, is one for which the Canadian-American Co. are sole agents. If there is no book in position, a sheet for covering is not taken, and no more are fed till the thing is put right.

Why is it that 250 Golding Jobbers have been sold in the United Kingdom during the last two years? On the stand of Hunters, Ltd., an impressive answer was given by one Golding which has been running and printing for 38 years, and was doing good halftone work in the Hall. By this time it owes the printer nothing, and indeed is entitled to a weekly pension in the form of a little drop of oil or anything of the kind it fancies.

In the Golding a half-turn is given to the rollers before they come up, so that they do not touch the forme in exactly the same place as on their down journey.

The Seybold 3-knife book trimmer on the large Smyth-Horne stand in the Gilbey Hall has a wide range from 24 in. by 16 in. down to 5 in. by 2½in. The head and tail knives are pulled down by side action rods, the front knife carriage by two action rods; the knives cut at a sheer angle of 45 degrees. The Seybold 40 in. automatic strip and label cutter is claimed to be the fastest in the world's market. The G.R.S. rapid jobbing folder can be fitted as an attachment for folds 16 and 32. This also claims to be the world's speediest. The operator can see the sheet all the way through.

On the Christensen wire stitcher feeder, as many as eight stitches can be made simultaneously. In certain cases the stitch product may be increased five-fold in comparison with what a firm has previously been doing. I have encountered the Christensen variously in my plant inspections, and always it appears to be regarded as a marvel for the work it devours. In The Field and Queen office there is a 10-station Christensen machine. Single books can run about 7000 per hour. It is possible to do 140 single stitches a minute or thereabouts.

The same firm showed the Brackett stripping and binding machine. This can strip, can reinforce, can join boards together as you need; and carries through all necessary operations for quarter-bound work, flush work, whatever your account or other books require, round books or flat.

The pen ruling machine on the same stand has an interesting lapping device, one sheet to be ruled just covering a small hind section of another sheet. As against the method of stringing in wooden grooves, they have adopted groove pulleys for the guidance of strings.

Mr. Jubb was in evidence; he has been a supporter of these exhibitions for many years. He showed rotary plates cast by Junior Autoplate machines and by the Winkler Auto, and various flat plates and formes of mono and lino slug. It is very interesting when the metals are right to be like the lazy gardener of the story—to sit on the fence and watch the "slugs" whizz by.

Mr. F. T. Corkett's son, Mr. John Corkett, B.Sc., is just about to return from America (where he has filled a position for a year or two) to join the Board of Pictorial Machinery, Ltd. Another son of Mr. Corkett's very ably detailed to me Pictorial Machinery's latest improvements. Their exhibits included: The latest model "Lithotex" step-and-repeat machine, the "Printex" negative printer, "Pictograph" cameras and stands, the "Lithotex" patented all metal printing-down frame, the "Picrograph" router. The "Printex" negative printer (all British, please note) is the latest product of this firm, and is designed to meet the universal demand in the lithographic trade for a machine capable of accurately printing a negative a number of times upon a sensitised metal surface. It is claimed that the "Printex" negative printer will completely supply the need in this respect and accuracy of register up to the one-thousandth of an inch is guaranteed. Their cameras and various appliances for the photo-mechanical trades show first-grade craft and workmanship.

The Aerograph Co., 43, Holborn Viaduct, are very old friends of our artist department. "A" model for process blocks was here. "E" for Christmas cards or window tickets. "C" for litho (with open spray and beautiful shading on stone or zinc); the "Pistol" for posters direct. And their spray painter will paint or limewash your factory. Nay, I imagine they may some day spray up a building for you, hose-ing some concrete or cement to fill up hollowed skeleton walls! We almost seem coming to that. Anyhow Aerographs are of immense value to the craft.

I hope I have shown how well the newspaper man was catered for by press builders, foundry plant makers, and electric power suppliers, not to speak of mechanical composers and plate makers. Messrs. Penrose and Messrs. Hunter, as always, exhibited every kind of engraving and plate duplicating plant, and Penroses showed names of many scores of newspapers whom they have assisted with their highly wrought and specialist products.

The thought of a newspaper man leaving the Hall would revert, say, to Hoe's, showing a unit of one of their famous rotary printing machines, with their comparatively new ink pump. By its use, they secure a prompt and even inking of the formes at the first printing, and they obviate thus the percentage of spoilage which has seemed more or less unavoidable, pending getting the usual ink adjustment and ink distribution thoroughly right for the reading public. The working of the ink pump is geared with the machine, and the character of the inking is affected by the speed of the machine rather than by time.

Then, too, our newspaper man leaving the Hall would reflect on the Cossar as he saw it working from ordinary flat formes of movable type, no stereotyping being necessary, and at the same time printing from the reel. The model "B" Cossar, let me remind you, prints four, six or eight pages at one time. If ten or twelve pages are wanted, they are obtained by printing these extras first and then re-reeling. The B 16 Cossar prints also four, six or eight pages in one operation, but this B 16 press accommodates a 4-page width. Very good spring meeting racing cards done upon the Cossar were shown at the stand. When one noted

how very good was the halftone on the Cossar, one still further appreciated its power.

The Lanston Monotype constructed during the course of the Exhibition a pyramid of Monotype composition requiring fifty pounds to complete. The pyramid represented 2,352 lbs. of metal which had gone through a caster; 2,352 lbs. of founders' type at 3s. a lb., which the Lanston suggests as a fair average, would cost £352 16s.; 2,352 lbs. of Monotype composition works out at only £61 10s., representing, as the Lanston with pardonable jubilance points out, a saving of £291 6s. The gradual building up of this pyramid was a source of great interest to hundreds.

"We are a Universal machine," one of the Monotype spokesmen says to me. "We are a foundry, too." He was thinking of the lead and rule caster, no doubt, as well as of the display letter.

All the Monotype salesmen by my experience are very well informed and very courteous, and they had many interesting things to say. As, for instance, "If you slow down your machine even without display attachment you can go up to 24 point easily enough."

On the Monotype stand one noted the Miller high-speed printing machine with its pile feeder suction principle). You can reckon 4,000 per hour, but you do not reach the vibration period before you are working at 4,500. With the variable speed drive, you can get any variation speed between 2,000-4,000."

Congratulations to my old friend, Mr. Quick, who has so long been associated with the Monotype Corporation, and now has become its sales manager. Congratulations, too, to the Corporation, for I am sure it will be splendidly served by him. And we may congratulate ourselves hereon.

A Lanston Monotype offset argument is that an offset press for speed should be built with very small cylinders, and the cylinders of its Harris are all of small sizes.

The Cossar display of a machine printing from the reel with type formes on a flat-bed I have mentioned; and also I have instanced the Hoe rotary press unit and its ink pump. It was no more possible for Messrs. Crabtree to show a whole stereo-fed rotary than for Messrs. Hoe to do so, but they showed a Crabtree patent folding mechanism with adjustments for setting and timing. The adjustments for the folding and drawing rollers are placed outside the front frame. The folding cylinders are of special construction, and provided with heavy steel shafts and oil ring bearings of extra length and size. They showed, too, a plate cylinder of a special rigid design and mounted on high tensile steel shaft. A quick plate lock is provided, operating on a semi-circular ring of special formation, which engages positively with the plate bevel and prevents distortion of the plate. Further, their impression cylinder is so made that any spring at the "gap" is prevented. The impression cylinder bearings are set for impression by means of readily accessible wedges.

With these things and their quad-demy two-colour Ensign super offset (Cross-fed) and demy two-colour Ensign super offset and a demy-folio Ensign super offset, Crabtree gave most helpful representation of what they can do for the newspaper and the printing worlds.

One came away from the Hall feeling that automatic and semi-automatic feeding has made great advances. The Cross feeder remained in one's thought. This, with its continuous cascade-like stream of paper, was shown in the Gilbey Hall, and also shown in the Main Hall, operating on various machines, particularly on the Linotype's new perfecter. Nine hundred Cross feeders are at work in this country; one firm has over 130. And yet I do not think I ever saw so much pile feeding. But I take it it depends upon the character of your work whether you are wise to put in a Cross or a pile feed.

I think most printers were specially interested in the semi-automatic feeds. We have been familiar with the diagonal rollers of the Canadian-American Co.'s Cleveland and Camco folders—the Canadian-American were showing in the Hall—and have noted how a girl can swiftly stroke one sheet after another towards the side gauges, not having to adjust them absolutely, because the folder gear carries them to the right position, and will not let them go in to be folded until they are absolutely set true.

We welcome Mr. H. T. Backhouse, of Walthamstow, who has done so much with his full auto and semi-auto feeds, and who showed on Linotype & Machinery and Mann machines how his H.T.B feeders slowed down with just the right decrease of speed before reaching the impression point.

Then it was very noticeable as one inspected stand after stand how many machines and smaller equipments were British built, and also how many machines or accessories of machines or devices miscellaneous were entirely new, at any rate as compared with the time of the last Exhibition (1921). Quite a number seemed to be less than four years old. And machines and machine parts or accessories with which we were more or less familiar appeared to be more finely finished. One after another who spoke to me laid stress upon this—on the better castings, the better finish altogether.

Still harking back, let me add that I was very much impressed with the offset, and particularly by the "cliver and contrivin'" mechanism and devices in the quad offset rotary shown by Messrs. Crabtree. It aims particularly at adjusting the damping, so that there shall be no excess of water to diminish the life and vigour of the print. The water trough roller, ratchet-worked, is divisible into a number of different feeds. You can have just the damping that suits the job. The feed roller rolls up and down the water trough roller with micrometer adjustment. The damping rider reciprocates. The feed roller can ink at each revolution or at each alternate revolution.

Glueing, gumming and varnishing machines on single- and double-roller systems, for paper, cloth and board, were shown in the Gallery by Fell & Hill, Ltd., 26, Hatton Wall, E.C. They deal with the smallest label or largest sheet or with paper taken from the reel. They can apply adhesive to that reel paper in any position.

Vertical chains arranged to compensate for the wear of rolls and eliminate gear thrust—these were some features of the chain-driven triple-roller ink mills represented by Marchant Bros., of Verney Road, London, S.E.16.

The Ludlow, of course, was in evidence. Mr. Slattery has been its zealous and able exponent, and wherever I find it installed as I go about the country, those who have installed it seem very glad

to have it. I expect to hear of many more installations in the near future. It carries on from where the ordinary lino or mono used to leave us.

Talking of linos and monos, let me give acknowledgment and hearty and admiring welcome to the bright brain or brains responsible for "The Gadget," issued from a Gallery stand in aid of the Printers' Medical Aid and Sanatoria Association. One of its quips was alone worth your "tuppence"—and more; that in which they reminded you that, what with linos and monos, and Typarys and the rest, printing was indeed what Prince Henry said it was—"a 'key' industry."

The Ogden Multiple Duplicating Machine was represented in what I suppose was a just-in-time little space in the Gallery, by its proprietors, the American Machine and Foundry Co., Ltd., of 58, Holborn Viaduct. They claimed that it was the only machine that made its own multiple negatives. The "uncertainty" which they declared was inherent in the vacuum method of getting contact, "they eliminated," they said, by their process. Their machine is operated in daylight. There are four machine specifications serving for plates from maximum 37 by 32 to maximum of 65 by 49.

Updike's book of types is a big and comprehensive work in two volumes, but Mr. C. W. Shortt seems to be that "book in breeches," as they said of Lord Macaulay. His long-time and highly expert acquaintance with all matters of type faces and type qualities was at the service of all who called at his stand, or who repair to 8, Fulwood Place, High Holborn. Printers have the opportunity to discuss and select with his help as between any of the leading families into which types are grouped—as, for instance, the Goudy, Garamond, Cloister, Bodoni, Century, Cheltenham, Caslon, Litho, Clearface, Franklin Gothic, Kennerley, etc. The Linograph, the Wetter type-high numberer, and "Noffset" for preventing offset, were among matters submitted by Mr. Shortt.

This doesn't exhaust the Exhibition, but it nearly exhausts me. Yet it has been a zestful task, endeavouring to set down points that might be well worth CAXTON readers' attention. I have very closely studied each of the seven exhibitions in the last twenty-one years. This was by far the most interesting to me. I think it was the best. But the best exhibition of all is the example our whole craft is offering to the whole realm of British industry.

FRANK COLEBROOK.

The Small Man at the Printing Exhibition

WHERE others might boast of Baghdad or the Holy Mecca herself, I should—but don't—boast of Islington as a place of excitement, where, in days gone by, horses glided like birds over hurdles, and noisy battles were staged, to the joy of many and the hurt of none.

Returning to that breezy, sunny street the other day, I inherited all my own memories, although the stage was differently set, and, instead of sleek horses, wondrous shining machines performed miracles of skill before the onlooker's eyes; and stalls, decorated and laid out, suggested the idea that to print a newspaper or make boxes or envelopes or type itself or a hundred other useful and desirable things, was within the reach of anybody who cared to do so. But, as an onlooker, my business was to appear as casual as possible, knowing full well that a mere gleam of interest would at once be interpreted into an order of who knows what fabulous value! On the whole this modest behaviour succeeded very well. Those "keen business men," whom one reads of so often, let me pass; they even allowed me to pry into their elaborate arrangements for transforming the raw material into its final shape, pressing into my hands a multitude of messages which have since that time converted me over and over again to their way of thinking, and have broken the bank—only to mend it again, I hope—more often than it would be prudent to admit.

One youth, in response to a modest inquiry of mine about the goods under his charge, bade me be of good cheer. "We all, even the largest, start in a small way," he averred. I longed to say that I was not so small, but realised how defective any argument must be in the face of things. At another stall, profiting by this experience, I embarked right away upon an argument, and, though I was beaten, the paper which I bore away as a trophy frankly espoused my cause. Narrowly watched by the attendant admiral, I viewed the marvels of the ancients, retiring with some thankfulness for not having put a few of the exhibits into my bag, according to plan.

A lady at one large stall made a note of my address. Only the fact that she got it wrong has, I feel sure, saved me from adding a whole battery of machines to my plant. Another lady very kindly marked my handkerchief, which might have cheered me had the initials been my own.

On venturing the least from my incognito I always met with the natural resistance of men with something to sell against a stranger whose conversation threatens to reveal a similar errand. They seemed to say, "This is your funeral," or words to that effect. We can't all have funerals at once. The occasion was memorable and delightful. In fancy I bought most of the machines in the show, squandering a lifetime, now in printing newspapers, now in making envelopes, now in casting type for no end of different projects. I liked the look, the noise, the smell of the show; the good-nature, even of that man who dwelt upon his decision to be "down to the brass tacks," and of the other who guessed that in a sense I might be a broker, pleased me. Being a small man, indeed, was every bit as good as being a large man—among so many of all sizes and shapes. And when the next exhibition is staged, I shall go early and stay late.—J.G.

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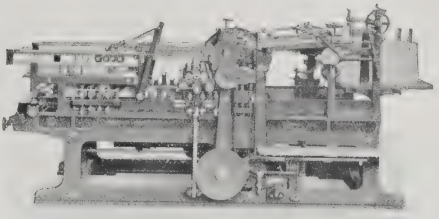

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Illustration Process at the Exhibition

THE importance of illustration as a branch of the printing industry was amply demonstrated at Islington. The rapid growth of photo-engraving was almost a miracle, and now the unfailing high quality in standard processes and the progress that is being made in new ones is indeed remarkable.

FEDERATION OF MASTER PHOTO-ENGRAVERS.

The Federation of Master Photo-engravers gave another example of their solidity of purpose in the arrangement of the collective exhibit in the North Gallery Annexe, and we hope that printers will have noted with care the admirable effect obtained.

In an exhibition of specimens something more than technical excellence is required, and the subjects that were chosen bore evidence to the great improvement in the taste of photo-engravers and the methods of display. The hanging of the frames, too, gave ample opportunity for each picture to show to its best advantage. The engravers are to be congratulated on their successful achievement, particularly Mr. Dent, the Secretary of the Process Engravers' Federation.

Although the arrangement of the exhibits of the various firms allowed every opportunity for different treatment and individuality, yet the gallery as a whole presented one unified scheme which greatly enhanced the value of the specimens. In the catalogue the Federation collectively drew attention to the importance and value of all classes of photo-engraving, both in black and white and in colour, and to the important part which illustration plays in publicity work of every description.

It is sometimes stated that photo-engraving reached the limit of technical perfection ten years or more ago; but the remarkably high standard demonstrated by the exhibits indicates that a finer understanding of the possibilities of the processes has been reached and exploited since the war

There is perhaps no need to refer especially to the standard principles of line, halftone, and three- and four-colour block making, because there is little to choose between one firm of engravers or another; but it is interesting to note that quite a number of firms are taking a serious interest in photo-lithography. Among these may be mentioned John Swain & Sons, Ltd., Shoe Lane, London; Hislop & Day, Ltd., Edinburgh; and the London and Provincial Reproduction Co., Ltd., Bradford. The Sun Engraving Co., Ltd., Milford Lane, Strand, showed some admirable examples of photogravure in monochrome and in two colours, and also in work of three or more printings. These included some colour reproductions of fabrics, which are stated to be facsimiles. The Nickeloid Electrotype Co., Ltd., exhibited some excellent specimens finished by the "Multimatt" process, which gives to three or four colour letterpress prints on art paper the effect of prints done on hand-made paper.

INDIVIDUAL EXHIBITS.

The Rembrandt Intaglio Printing Co., Ltd., Lancaster, the pioneer of photogravure houses, was an interesting feature of the exhibition, and the beautiful transcripts produced by their colour process, as well as those in monochrome, showed the wide applications of Rembrandt gravure to high-grade commercial printing, ranging from catalogue illustrations to cigarette stiffeners, picture postcards, etc.

The exhibit of Messrs. Vincent Brooks, Day & Son, Ltd., was of more than ordinary interest. Some historic examples dating back to 1823 showed the exquisite quality of the chromo-lithography produced at that time. It would have been interesting had there been more space to have shown a complete historic collection illustrating the gradual change in the character of the lithographic trade during the past one hundred years. Most of the contemporary examples consisted of posters, and many of the artists whose work is recognised as representing the highest standard of poster art in this country have been reproduced by this company, including Spencer Pryse, Nancy Smith, Fred Taylor, McKnight Kauffer, and many others. A number of reproductions were reproduced by photo-lithographic methods, but it was encouraging to find among the specimens a few auto-lithographs, which must always remain the basic expression of lithography.

Messrs. George Gibbons & Co., of Leicester, who were early in the field of photo-offset reproduction, attracted a good deal of interest with their stand at the last Printing Exhibition. They now demonstrate the great strides which they have made since that time in their "Similart" process, and showed some perfect colour reproductions of water colour drawings printed on hand-made paper. They have also applied their process to book illustration, and have obtained successful results in monochrome of great richness by the use of two printings.

Messrs. Fosh & Cross, Ltd., of Aldgate, London, have an established reputation as printers to the trade, and were amongst the first to supply plates printed down by the photo-litho process. This firm prepared an interesting set of specimens especially for the Exhibition, many of which were produced by the photo-offset process.

Another firm that has made a great deal of progress in photogravure is Messrs. G. & G. Ponton, having made a speciality of machine-printed photogravure in colour. They have so far perfected their process that they are able to give reproductions from either oil or water colour paintings that rival letterpress colour printing for accuracy of colour rendering. The richness and brilliance of the photogravure process was well exemplified in the examples shown.

Some excellent three-colour printing was shown by Messrs. Hudson & Stracey, Ltd., who have specialised on work of this character. They also showed a useful patented electric drying apparatus, which has been proved to be of great practical value on all classes of machine, and almost entirely avoids slip-sheeting.

The considerable possibilities of three-colour printing on non-coated paper was shown in an exhibit of A. Chris. Fowler, 6, New Union Street, Moorfields, E.C.2.

The exhibit of the London School of Printing is referred to elsewhere; but particular reference must be made in this note to the high standard that has been attained, judging by the specimens shown of printing by the photo-offset process.

An Exhibition by Mr. Geo. W. Jones

EARLY printed books! Why should these be shown at the Printing Exhibition of 1925? Is it not an anachronism that at a time when the majority of printers' minds are fixed on improving their machinery and finding other means whereby production may be increased and efficiency improved, that a room should be devoted to showing books most of which were printed in the fifteenth and sixteenth centuries and collected by a printer? Those who wish for a complete answer to this question have only to examine the work that is being produced to-day at The Sign of the Dolphin.

One of the outstanding features of the successful exhibition of printing at the Agricultural Hall was represented by this unique exhibit provided by Mr. George W. Jones, which comprised a small selection of books from his library. Since William Morris showed us that the way to improve printing was to take our inspiration from the masters of our craft who gave it birth in the fifteenth century, there has been a growing appreciation of the practical value of the study of the early printers, not only of the fifteenth century, but of the one which followed it. Printing in its infancy and in the succeeding centuries, which were the periods of its richest development, passed later through the stage which is within our memory when the craft became little more than "mere trade." The enormous scope for artistic expression and, what is equally important, of direct and forceful commercial appeal combined with beauty, was almost lost sight of; instead, vulgarity and ugliness were the chief attributes of most forms of printing that were used for trade purposes. George W. Jones has told us that he met William Morris, and we all know how wonderfully he responded to this influence. He put the message he received to practical use, and has extended it far beyond the field to which Morris could have applied his ideals. George W. Jones is above everything a practical craftsman who aims to extend the use of good printing, and to make commercial printing a better thing. How can we explain his influence? Undoubtedly it is through his imagination and forcefulness of purpose. These qualities find an excellent opportunity for expression in the library of early printed books that he has collected at Gough Square. This library covers the widest possible field of examples of printing types of all periods as well as the rich decoration that is to be found in the books. Some are rare and almost unique copies; others, whilst they are of infinite value to the practical printer who knows how to use them, may be of little interest to the mere bibliophile. A few are but fragments of the originals, but they contain, without doubt, lessons that will be applied in due course. A printer's library of such a character is an unfailing source of inspiration, and those who can learn how to profit by the study of early printed books will find a rich reward awaiting them, not only in practical achievement, but in a better understanding of their job.

Had more space been available, the selection of books exhibited would have been a larger one, but we must be thankful for what has been done, and perhaps, at some other time, there may be an opportunity to make a larger display. The selection from the library was made and arranged by Mr. A. Forbes Johnson, of the British Museum, and the catalogue which he prepared is appended.

Unfortunately, the exhibition is over; but an examination of the books emphasised a number of points that are of interest to the earnest printer. Think of the enormous number of books printed between 1455 and the end of the fifteenth century, beginning with the forty-two-line Bible, and the perfection and craftsmanship which these early masterpieces portrayed. The industry of the early printers fills us with amazement when we remind ourselves that they had no adequate materials to work with—no accurate presses or fine printing inks, but depended entirely upon patient craftsmanship; should not then our admiration be profound!

We do not propose to enter into a controversy whether Coster or Gutenburg was the first to print with movable types; but the 42-line Bible will remain a monument throughout the ages.

The early German books were printed in type similar to the forms of letters used by the scribes in Germany, and in point of fact they compare favourably with German manuscripts of that period. Our chief interest in the early German printing is derived from the illustrations, which resemble the earlier and contemporary xylographic prints; but the art of woodcutting reached a high state of development at the end of the fifteenth century and at the beginning of the sixteenth, the Nuremberg Chronicle, 1493, being a notable example: the illustrations of The Chronicle were designed by Wolgemuth, the master of Albert Dürer. The Theuerdanck, printed by Hans Schœnsperger at Nuremberg in 1517, is undoubtedly the most richly ornamented book of the period: the type flourishes do not conform to our present ideas of simplicity, but the beauty of the pages as a whole cannot be questioned; flourishes may be good if they are arranged by a designer so that they form a part of the scheme of decoration; but they would be extremely ugly misapplied.

The early Italian books remind us of the inevitableness of the Roman character. An Appian manuscript was shown written in the humanistic script of the fifteenth century, on which the Roman type undoubtedly was based; some authorities go so far as to state that the scribes in the twelfth century originated the style of lettering used by the first Roman and Venetian printers in evolving their first types. How little has the design of type changed in these later centuries. Sometimes attempts are made to depart from the forms that were given us by Jensen and Aldus; but the further the designs are removed from these classic models the worse the types become, and we are brought back quickly to the thought that the old masters planned and designed better than they knew. It is not our wish to rob France of Garamond, Granjon and the others, but the foundations were well and truly laid in Italy. A study of the illustrations in early printed books is of the greatest value to the printer. In those days illustrations were invariably a part of the book, and were not inserted, as one frequently finds to-day, as something foreign and entirly dissociated from the type. Germany developed her illustrations on the basis of realistic expression; the pages, however, were always complete entities, the illustration and the type together

forming a complete design. A comparison of illustrations in the early German and Italian books shows that the designers had a marked difference in outlook. In general, illustrations in Italy were more architectural in their treatment, the aim being rather to decorate the page than to illustrate the event. An exquisite copy of the Hypnerotomachia Poliphili was undoubtedly one of the gems of the collection, both from the design of the pages, the excellence of the illustrations, and the beauty of the type.

France in the sixteenth century gave us the richest period of book decoration, and the influence of Geofroy Tory is known to be responsible for the developments that took place; Tory was a scholar and a woodcutter, and afterwards a printer. An extremely rare copy of Tory's "Champfleury" was shown. Tory worked in conjunction with Simon de Colines, and produced a remarkable collection of books, some unadorned, but others decorated by Tory in his perfect style.

In the English section of the exhibit, some pages of Caxton and Wynkyn de Worde must give satisfaction to the British printer, although they do not assist us as do the books of Germany, Italy and France; we can afford to be proud, however, of the work of John Day in the sixteenth century. At a later time we come to the Baskerville represented by the "Horace" printed in Birmingham in 1770, and can admire wholeheartedly the perfection of the presswork and the quality of the type, which is at length being recognised for its beauty.

Bodoni's work has a clear cold charm of its own, but whether his example is one to be emulated may be a matter of doubt, excepting for his wonderful craftsmanship.

It is gratifying to find how much this collection of books has been appreciated by visitors to the Printing Exhibition. The Prince Henry performed the opening ceremony, and Mr. Jones was privileged to explain the collection in some detail, and it has been suggested that the time spent by His Royal Highness in this room somewhat disturbed the time-table! Prince Henry was greatly impressed with the information that the Roman type which we use to-day is the lineal descendant of Jensen's fine Roman fount designed in the fifteenth century, so that we owe to Italy the form of letter by which, for four centuries, thought has been communicated by the agency of the printed word.

Among the letters which Mr. Jones received, we are able to reproduce a characteristic one from Mr. Maddox, of Manchester:—

May 24, 1925.

Dear Sir,—Returning from the Exhibition, I feel I ought to express some personal appreciation of your service to all in the trade who, like myself, have a special love for the early printed books. When in town I generally find my way to the rare old book shops near Charing Cross, just to gaze through the windows, and, if possible, steal inside to ask a price. But to be among printing machines representing the last word in modern efficiency, and have at one's side your own collection of mediæval books was something delightful, inspiring and provocative of thought. It is one thing to be in Rylands Library or the British Museum in an atmosphere which almost prohibits a casting of the mind over to machinery, but quite another to reflect over mediævalism amidst the hum of super-efficiency sent out by the cogs and gearings of the modern press.

I suppose I owe something to your influence on typography—perhaps not so much as my friend John Taylor, who had a direct touch. Your visit to the recent Master Printers' lunch and your enthusiastic talk on printing and old printers revived in my memory a lot of what had been lying too dormant. Along with many others I look to a return visit with keen zest.

HARRY A. MADDOX.

5, Burford Drive,
Whalley Range,
Manchester.

Catalogue of Some Early Printed Books and other Examples of Printing from the Library of Mr. George W. Jones, at The Sign of the Dolphin, 12-14, Gough Square, E.C., selected and arranged by Mr. A. Forbes Johnson, of The British Museum.

EARLY GERMAN PRINTING.

A Page of the 42-Line Bible printed by Gutenberg, Fust and Schœffer, at Mainz, about 1455, the first substantial book printed from movable types.

A Sheet of the First Dated Bible, Fust and Schœffer, 1462, Mainz.

A Psalter printed at Augsburg by Gunther Zainer about 1476, showing one of his woodcut initials. William Morris was greatly influenced by Zainer's fine black letter.

A Josephus printed at Augsburg in 1470 by Johann Schuessler in a type acquired from Gunther Zainer.

Latin Bible printed by Anton Koburger, Nuremberg, 1478, showing the work of the illuminator.

An *Albertus Magnus,* Ulm, 1474, printed by Johann Zainer, the first printer at Ulm.

Paulus de Sanctus Maria, printed at Mainz by Schœffer, 1478.

Breydenbach, Mainz, 1486, with woodcuts, after Erhard Reuwich. Printed in the types of Schœffer.

The Schatzbehalter, 1491, and *Nuremberg Chronicle,* 1493, printed by Koburger at Nuremberg, both with woodcuts after Michael Wolgemuth. Two of the most richly illustrated German woodcut books of the latter part of the fifteenth century.

A Terence printed at Strassburg by Johann Gureninger, 1496, a book also known for its woodcuts.

A Missal printed at Augsburg by Erhard Ratdolt, 1505, showing the printing of the fine initials in two colours.

Theuerdanck, Hans Schœnsperger, Nuremberg, 1517, printed on vellum, a book famous for its woodcuts as well as remarkable for its type flourishes.

EARLY ITALIAN PRINTING.

Nicolaus de Lyra's Commentary on the Bible, Rome, Schweynheim and Pannartz, 1471, printed in the first roman fount by the introducers of printing into Italy.

A Manuscript of Appian, written on vellum in the humanistic script of the fifteenth century, on which roman type was based.

Cyprian, Venice, Wendelin de Spira, 1471; the first roman fount used in Venice.

Pliny, Venice, Nicolas Jensen, 1476; the most famous of all founts of roman type; large folio with illuminated initials.

Pope Boniface. Liber sextus decretalium; Venice, Jensen, 1476; printed on vellum in Jensen's two gothic types.

Alexander de Imola, Venice, circa 1476; printed by John of Cologne and John Manthen, successors of Wendelin de Spira.

Historia Fiorentina, Venice, 1476; printed by Jacques le Rouge, a compatriot of Jensen, whose types he used.

A Missal, Venice, Johann Hamman, 1488; illuminated and richly rubricated.

Appian, Erhard Ratdolt, Venice, 1476; one of the first Italian books in which woodcut initials and borders are used.

Hypnerotomachia Poliphili, Venice, Aldus, 1499, the most famous of all early illustrated books.

Epistole of St. Catharine of Sienna, Venice, Aldus, 1500, a book in which italic type appeared for the first time.

Petrarch, Cose volgari, Aldus, 1501; the second book printed in the new italic cut by Francesco Griffo.

Privilegia Basilicæ Sancti Petri Concessa, Rome, Antonio Blado, 1549; an example of non-Aldine italic.

Tagliente, La vera arte de lo scrivere, Venice, 1524; the second writing book; printed from blocks.

EARLY FRENCH PRINTING.

Durandus, Rationale, Paris, 1475; printed by Gering, Cranz and Freiburger, the three Germans who introduced printing into France in 1470.

Froissart, Paris, Antoine Vérard, circa 1495; printed in "lettres bâtardes" the French form of rounded gothic.

Le livre contenant exposition sur le 50e pseaulme, Paris, Denys Janot, 1532; a book showing an early use of printers' flowers.

Geofroy Tory's Champfleury, 1529, with his own woodcuts.

Two Books of Hours, printed in Paris by Simon de Colines in 1543, with borders attributed by Bernard to Geofroy Tory.

Guillaume Paradin, Lyons, Jean de Tournes, 1548.

Bernard Salomon's Woodcuts, illustrating the New Testament; printed by Tournes, 1554.

Simeoni, Metamorfoseo d'Ovidio, Tournes, 1559, showing the arabesque borders used by Tournes.

An Example of the "Civilite" Type of Robert Granjon; printed at Lyons.

Paschalius, Henrici II. elogiom, Paris, Michael Vascosan, 1560.

Examples of Paris Books of Hours, issued in the first half of the sixteenth century by Vérard, Simon Vostre, Thielman Kerver, and Gilles and Germain Hardouyn.

ENGLISH PRINTING.

William Caxton. Leaves from some of his Works.

Bartholomæus, Westminster, Wynkyn de Worde, circa 1495, showing the black letter of Caxton's successor.

A Prymer is Englysshe, London, Thomas Berthelet, 1543.

The Byble, London, John Day and William Seres, 1549; *Aelfric,* A Testimonie of Antiquitie, London, John Day, circa 1567, showing Day's Anglo-Saxon type.

Whitney, A choice of Emblems, printed at Leyden by Plantin's son-in-law Raphelengius, in 1586.

Edmund Spenser's Works, London, H. Lownes, 1617.

Horace, John Baskerville, Birmingham, 1770.

Goldsmith, Poems, W. Bulmer, London, 1804, printed in types cut by William Martin, a pupil of Baskerville; with woodcuts by Thomas Bewick.

WORKS BY BODONI.

Four books from the Press of Giambattista Bodoni, the great eighteenth century typecutter and printer of Parma, Italy:—

The *Horace* of 1791;

The *Dante* of 1795;

The *Anacreon* in 32° of 1791; and

The *Manuale,* issued by Bodoni's widow in 1818, after Bodoni's death; the finest of all type specimen books.

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Awards in the Exhibits Section

THE display of printing in the section open to adjudication for award was better than it has ever been. But this part of the Exhibition could be greatly improved if more printers could see their way to send in specimens of their work. There was a strong and representative panel of judges, and one would imagine that any printer would be proud to receive a recognition of the merit of his work. The fact remains that comparatively few houses are prepared to show their work under these conditions. Such work as was submitted was good. There was excellent material in every department.

The awards are as follows:—

GOLD MEDALS.

Messrs. Langley & Sons, Ltd., London—for letterpress posters.
Messrs. Sanders, Phillips & Co., Ltd., London—for letterpress, commercial and decorative typography.
Mr. George W. Jones, Sign of the Dolphin, London—for colour printing.
Messrs. Brooks (Vincent), Day & Son, Ltd., London—for picture posters.
Messrs. Fosh & Cross, London—for offset printing.
Messrs. Whittingham (Chas.) & Griggs, Ltd., London—for lithography and offset.
Messrs. G. & G. Ponton, Glasgow—for gravure.
The London School of Printing.
The L.C.C. School of Photo-Engraving.

SILVER MEDALS.

Messrs. Morton, Burt & Sons, London—for commercial and decorative typography.
The Westminster Press, London—for commercial and decorative printing.
Mr. Harold A. E. Pearce, Harrow—for decorative printing.
Messrs. Wass, Pritchard & Co., Ltd., London—for litho-offset.
Messrs. David Allen & Sons, Ltd.—for litho-offset.
Messrs. G. W. Bacon & Co., Ltd., London—for map printing.
Messrs. Geo. Philip & Son, Ltd.—for map printing.
A. Chris. Fowler, London—for colour printing.
The Ilford Recorder Printing Co.—for colour printing.
Messrs. Macaire, Mould & Co., London—for colour printing.
Messrs. Thacker, Spink & Co., Calcutta (Overseas Section)—for general printing.
The Commercial Press, Ltd., Shanghai, China (Overseas Section)—for general printing.
The Times of India, Calcutta (Overseas Section)—for colour block printing.

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Mr. F. Harvey, L.S.C. Jobbing Guild, 12, Cadoxton Avenue, Stamford Hill, N.15—for letterheading.

Mr. A. G. White, L.S.C. Guild, 33, Chapter Road, Kennington, S.E.17.

SILVER MEDAL (SPECIAL AWARD).

Mr. Walter Talk, compositor at Wald. Zachrisson's Printing House, Kopmansgat, 32-38, Gothenburg, Sweden.

The L.M.P.A. Challenge Trophy

THE competition for the best display of printing submitted by any one of the districts of the London Master Printers' Association was a great success. Great credit must be given to Mr. Alfred Langley, not only for the inception of the idea, but for sustained interest in carrying the scheme through. There is little doubt that the competition has done great good. It brought members of London groups together in a very desirable spirit of team work, and it also presented to the printing world an exhibition of printing highly creditable to all who contributed to it. The Challenge Cup was won by the West and North-West District, and it must be admitted they seemed to richly deserve the award.

LONDON INTER-DISTRICT PRINTING COMPETITION CHALLENGE CUP.

Official Visits to the Exhibition

THE WORSHIPFUL COMPANY OF STATIONERS

ON Monday the Worshipful Company of Stationers, on the invitation of the Organisers, visited the Exhibition. Those present included the Master of the Company, Mr. Richard Bentley, Mr. H. Hill, and Mr. R. T. Rivington (clerk).

Members of the Company were entertained to lunch, when Mr. Lock (Chairman of the Exhibition Council) welcomed them to the Exhibition, and the Master responded, saying how fitting it was that their ancient Company, now in the sixth century of its existence, should identify themselves with all that made for the prosperity of the printing and stationery trades.

Members of the Livery assembled for tea, when the following were present: Messrs. R. A. Austen-Leigh, R. H. Stevens, Stanley Low, J. H. Adams Keene, Fredk. Gillis, E. C. Langley, L. C. Langley, N. Gordon Unwin, Rev. W. C. Percy, Messrs. R. G. E. Unwin, Thos. S. Hunt, G. H. Kellie, Capt. Donald F. Kellie, Messrs. J. E. Fraser, W. B. Baddeley, A. R. Creedy, John Boulton, E. Bernays, S. J. Searley, Edward Unwin, Herbert W. Jordan, E. C. Austen-Leigh, Ronald Spicer, T. Atkinson, Sydney H. Greenaway, W. F. Thompson, J. Alex. Bailey, etc.

Mr. Bridges extended to them a cordial welcome. He was sure the Exhibition would provide a great deal that was interesting, and he remarked that the Stationers' Company was one of the oldest institutions identified with the printing and allied trades. The Company stood out prominently as exercising a great influence in connection with the industry, and they would be glad to know that the present Exhibition was one of the finest held in any part of the world. Their colonies looked to the old country to take a lead, and the improved machinery and appliances on view would, no doubt, be keenly studied by visitors from abroad.

Mr. Richard Bentley, the Master of the Stationers' Company, expressed to Mr. Bridges their appreciation of his hospitality, and also congratulated him on the arrangement of such an excellent exhibition. It was most fitting that it should be held in London. The printing industry was one of great importance, and the value of the Exhibition could not be over-estimated. It brought visitors from the provinces and also from overseas, and created a favourable impression of the great advance made by British manufacturers in supplying mechanical and other devices which, from the point of view of simplicity and economy, augured well for the future of the great printing and allied industries of this country.

JOINT INDUSTRIAL COUNCIL CONVENTION

A MOST encouraging attendance, together with a great interest, marked the Convention of the Joint Industrial Council of the Printing and Allied Trades, held at the Exhibition on Wednesday, May 20.

The proceedings were presided over by Mr. George A. Isaacs, Chairman of the Council, who was supported on the platform by the President of the Federation, Mr. W. Howard Hazell, J.P. Mr. H. A. Bethel (Manchester), Mr. E. H. Lee (Nottingham), Lieut.-Col. Fletcher, and Mr. A. E. Holmes and Mr. A. E. Goodwin (Joint Secretaries of the Council).

Others present included:—Mr. T. E. Naylor, M.P., Mr. Edward Unwin, Mr. Eaton Hart, Mr. Wilson Howes, Mr. E. H. Dennis (Scarborough), Mr. D. H. King (Birmingham), Mr. Geo. Jones, Mr. Timberlake, Mr. W. A. Clowes, Mr. R. B Simnett, Major Oscar Viney, Mr. W. Whyte (Secretary London Master Printers' Association), Brigadier-General Bemrose, Mr. Frank Murrell, Mr. R. Kneale, Mr. T. Sproat, Mr. T. G. Newland, Mr. J. Ames, Mr. Edgar Northend (Sheffield), Mr. J. D. French, Mr. J. McQuittie (Belfast).

A SPLENDID VINDICATION.

Mr. George Isaacs, in his opening address, presented a valuable and forceful vindication of the founding and subsequent activities of the Council. He said:—

Ladies and Gentlemen,—It is five years since the previous Convention of the Joint Industrial Council of the Printing and Allied Trades, which was the first such conference in our industry. During the period since that convention the Joint Industrial Council has been tested from many points of view, and it is for you to judge if it has justified its existence. In 1920 the Joint Industrial Council was just out of its swaddling clothes, a fairly lusty infant, making a noise that its parents thought musical, though its critics held otherwise. During the past five years it has learned to walk and talk, to sit up, take notice, and insist upon being taken notice of. In fact, we have passed that stage of our existence, when the various bodies that comprise our craft begin to "mind their steps" for fear of disturbing the child. We have reached a period where our component organisation consult and seek the advice of the youth that has so soon become so surprisingly lusty, vigorous and well informed, before embarking upon actions that seem to go beyond the regular methods of peaceful negotiations. Up to the near past the J.I.C. had only secured a cold and formal adherence to the letter of its constitution, now I venture to suggest it is being accorded a recognition of its spirit, due to its efforts and achievements.

The chairmanship of the J.I.C. is the highest honour our craft has in its power to confer. The distinguished persons in our industry who have been so honoured since our formation, are Mr. Alfred Blades, the Rt. Hon. C. W. Bowerman, M.P., Dr. McLehose, Mr. H. Skinner, Mr. E.

W. Humphries, and Brigadier-General Bemrose, the position having been occupied alternatively by an employer and an employe respectively. I am sure I speak for my predecessors as well as myself when I express the intense feeling of pleasure that appointment to so important and honourable a position has given. To have secured the confidence of all the varied sections that go to make up our great industry is something of which even the most modest of men would desire to acclaim to all the world.

I also feel that I am but echoing the thought of my distinguished predecessors when I say that the real spade work of the Council is done by its committees, and falls largely upon the committee chairmen, who are also selected in the same alternative manner as is the Council chairman. Great indeed has been the labour of these committees, given in the spirit of service and without fee or other reward than the satisfaction of having done something well worth the doing. I do not intend to refer in detail to the work of the committees, but simply to make a general reference to each, in some small measure of justice to thir efforts and in recognition of their attainments. They would, however, desire to have associated with them every member of the committees with whom their services have been given.

The committees appointed are those which deal with organisation, apprenticeship, technical and office training, health, unemployment, general purposes, and finance.

The Finance Committee has the least work to report, for the J.I.C. has up to now been able to make progress without a cash account, the respective Federations each bearing their separate share of expenses. The General Purposes Committee has for its main function the preparing of business for Council meetings, and advising upon matters of routine. By its service it has eased the burden that must have fallen upon the Council, and has made easier the work that we have had to undertake. Messrs. T. E. Naylor, M.P., J. C. Coppick, J. D. French, and Ernest Waterlow have served as chairmen of this committee. The Apprenticeship Committee has the onerous duty of advising upon questions relating to indenture of apprentices, the terms of service of unindentured learners, and the extent, nature and quality of training. The work of this committee, when adopted by the industry at large, must have the result of improving the efficiency and status of future journeymen and women, raising the standard of our product, removing from the employer the worry of a future shortage of labour, and the unions from the inefficient worker, and relieving the employe of the fear of unemployment due to swamping the craft with a surplus of labour. Above all, it will bring to a common centre for settlement in the common interest those sometimes very small but equally very important vexing and difficult questions of the proportion and character of new entrants that have in the past been dealt with by various sections and in different localities without heed or thought to consequences elsewhere. This committee had indeed been fortunate in having secured the services of Messrs. J. C. Coppick, E. W. Silk, and J. D. French as its chairmen.

A great deal of research and statistical work has been carried out by the Unemployment Committee. At the time that this committee was first formed the Unemployment Insurance Act had not undergone the amendment which has since made it more definite in its application, and it was thought to be possible for industries to create more comprehensive schemes for themselves and to contract out of the Act altogether. The Unemployment Committee, mainly under the enthusiastic chairmanship of Mr. J. S. Waterston, set itself to draft a scheme whereby the printing industry could contract out of the Act and provide itself with benefits above those which the Act provided. It will be remembered that the Ministry of Labour had power to sanction this to be done, but by the time the Unemployment Committee had their scheme sufficiently perfected for submission to the Ministry of Labour the Government had decided not to approve of further contracting-out schemes, and, as you know, amending Acts have since made that impossible. Undiscouraged by the task that proved in vain, the committee set itself to provide a scheme which was to be supplementary to the provisions of the Unemployment Act, but this has not been yet approved by the Joint Industrial Council, partly owing to the severe slump in trade and the consequent strain upon the funds both of the employers and of the unions, and partly owing to other considerations which may in the future be overcome. Besides Mr. J. S. Waterston, the Unemployment Committee has had as chairmen Messrs. T. Timberlake and E. W. Humphries.

The Organisation Committee have earned our warmest commendation, for, whilst their task has been delicate and difficult, their achievements under all circumstances have been most satisfactory. In the beginning the J.I.C. was looked upon as the dream of idealists, and, like most dreams, ought to have been forgotten in the wakeful hours. The Organisation Committee had carefully to mould local opinion and encourage them to see that the dream had become a reality. They found in some important areas that the dream had in fact become a nightmare, either a bogey that frightened one side by its *actions,* or a bogey that disgusted the other side by its *inaction.* This Committee had to meet and answer all kinds of charges as to wrongful acts either of commission or omission. Right well have they laboured. The outstanding instances where as yet complete success has not been achieved are by their very isolation actual monuments of the wonderful work of the Organisation Committee. Chairmanship of this Committee has demanded a very great deal of time in travel and attendance at local meetings. General W. W. Bemrose and Messrs. H. Skinner, H. G. Bethell and R. Kneale have earned our thanks in that connection. (Applause.)

The Health Committee are entitled to the unstinted admiration of us all. It is a pleasure to record the wonderful reception the industry has given to the results of the Health Committee's labours. Employer and employed have shown by their willingness to help in the inquiries, and to aid in the distribution of the leaflets on health habits and methods that have been published. Busy men have eagerly come forward with information as to new processes designed to take the place of old processes that had an injurious effect upon the health of the worker, one notable example being that of metallic gold ink as against bronzing, the success of which for letterpress use is fully proven. The Committee is persevering to obtain similar results for the lithographic printer. In this connection appreciation must be accorded to the help and research of members of the Society of British

Printing Ink Makers. The Health Committee secured the publicity of leaflets dealing with healthy habits in the works, lead poisoning, precautions against consumption, ventilation and health, bronzing and bichromate poisoning. It has in hand an important question of artificial lighting and its effect on eyesight, and experiments are now being undertaken, the results of which will be published in due course.

I here crave your indulgence for a moment's retrospect to pay tribute to one whose early labours led to the establishment of the Health Committee. It was at Leeds in 1918 that the late Mr. Walter Hazell, with a member of one of the trade unions, was first appointed as a kind of Interim Health Committee before the J.I.C. had actual existence. The preliminary work undertaken by the late Mr. Hazell has been the finger-post that pointed to the road along which the Health Committee when appointed began its travels towards the success, I suggest, it has now achieved. (Applause.) It was my great privilege to serve the Committee as chairman for the first two years, since when Mr. W. H Thomas (since deceased), Mrs. A. Bridge, and Mr. E. H. Lee have given themselves unstintedly not only to the work of the Committee itself, but also in attending local meetings and giving addresses upon the Committee's ideals and achievements.

Lastly, but by no means least, I make reference to the Conciliation Committee, whose work is the keystone of our structure, for just as the subordinate stones of an arch are compressed and bound together by the keystone, so are the component parts of our J.I.C. held in position by the Conciliation Committee. The keystone of our Council is Confidence—confidence in each other's desires, intentions and achievements. The Conciliation Committee is the Confidence Committee—surely it has earned that designation. It is the most nebulous of all our committees; it is the most illogical judged by common standards, and the most powerless when measured by its ability to enforce obedience. There is no element of arbitration in its existence, but by mutual consent it depends upon the moral influence of conciliation. It is nebulous in that it has no regular members other than the chairman and vice-chairman of the Council, all other members being appointed specially to deal with each separate case that is brought before it. It is illogical inasmuch as the parties appearing before it, having each appointed their own share of the jury from among their own friends and supporters, yet remain quite free to reject the opinions expressed by those whom they have themselves so appointed. It is powerless because it cannot lay down a decision, but is restricted to recording an expression of opinion—the term used is a "finding"—which both the parties are free to accept or reject. Yet it is becoming powerful by virtue of the confidence that has now become reposed in it. In the beginning, contending parties would not come to the Conciliation Committee until they were urged to do so; later they came merely as a matter of course as one of the steps that must be taken to clear the decks for action. Still later they came in the hope mainly that by so doing trouble and expense might be avoided. Now I think they are beginning to come because they have confidence in its methods and fairness, and also because no one to-day would take the risk of injuring the keystone of our arch. The chairmanship of the Conciliation Committee is vested in the chairmen of the Council, whose names I stated earlier.

I should fail in my duty were I to omit reference to our joint secretaries, Mr. A. E. Goodwin and Mr. A. E. Holmes. (Applause.) Surely we are exceptionally fortunate in possessing the service of two such men, each of them trusted, respected and admired by the other side, each having complete confidence in the other, each owning a sunny temperament and kindly personality that has, I am quite sure, endeared them to us all. They have earned the warmest thanks of all who form the Printing Trades Joint Industrial Council. (Applause.)

I have made reference to keystones and arches, and I would like to extend that reference. The Joint Industrial Council is a Bridge that unites the employer on the one side and the employe on the other. Its foundations are understanding and knowledge of each other. Its two main columns of support are our joint secretaries, the arch stones are its committees, the keystone is confidence. The stream that passes beneath the Bridge and has separated the two parties is the River of Misunderstanding, the denizens of that river are mistrust, ignorance and bitterness. As the keystone of confidence by repeated pressure in use binds our structure together and strengthens it, so does the original need for it disappear in the background, for the waters of misunderstanding begin to recede lower—flooded time and again, it is true, at seasons of passion which break out now and again, but always less frequently. Some day we trust the river will have become just a dry channel, exposing the bones of those bitter things which flourish only in darkness and pass away when confronted with the light of understanding. Across the Bridge traffic is flowing both ways, employers are beginning to know better their workers and those who represent them, and to realise some of the worries of the workers' life. The workers also are getting a glimpse of the problems that daily confront their employers, and the troubles that beset our industry. Out of such knowledge comes understanding, and out of understanding comes *Peace*. May the Bridge endure until the waters are dried up for ever, and as we walk across the dry river bed obliterating with the free passage from one side to the other even the relics of the old bitterness and misunderstanding, may we lift our eyes to the Bridge of Confidence, which, having served its purpose of spanning the waters, and whilst awaiting the call for further service, will remain as a monument to the ideals, the attainments, and above all the common sense of all those who together comprise the Art Preservative of all Arts.

HEALTH PROBLEMS.

Mr. E. H. Lee (Nottingham), Chairman of the Health Committee of the J.I.C., opened a discussion on health problems in printing works, and urged the importance of the work of his committee, and generously acknowledged the consideration with which its suggestions had always been received. The idea of setting up this committee arose out of hard spade work which had been done by the late Mr. Walter Hazell and Mr. George Isaacs. Great good had been done by the old Betterment Committee before the founding of the Council. The Health Committee was set up to improve the conditions of work in their offices. There was nothing mercenary in this. The one desire was to improve the conditions of work and make brighter the working hours. The work this committee had done could best be gauged by the number of leaflets which

had been issued in connection with their propaganda. He paid a great tribute to the work of the late Mr. W. H. Thomas, of Middlesborough, and his work relating to tuberculosis and lead poisoning. In these leaflets certain matters were stressed:—Ventilation of workshops and adequate lighting, a satisfactory standard of sanitary and lavatory accommodation, a plentiful supply of drinking water, proper seating for women workers, and adequate provision for the warming of food. As to what employes could do to improve conditions they had urged upon them that certain obligations rested upon them to see that these provisions were carried out. Men were also repeatedlly warned against spitting as a very objectionable practice, and a grave menace to health. While the risk of lead poisoning was not very great in the printing trade, it was very serious when it did arise. Mr. Warren called the attention of the Council to Fry's dross container, and the Council gave its blessing to this expedient for minimising risk. One of the most important leaflets issued was that entitled "Precautions Against Consumption." He (the speaker) was not an alarmist in the matter. He thought there was a large diminution in the incidence to this trouble, and he thought statements exaggerated the risk to pulmonary consumption in the printing trade. In Nottingham in 1923 and 1924 there had been six deaths out of 3,000 from consumption of printing employes, which was just the average for the whole country. In the U.S.A. deaths from consumption had dropped from 34 per thousand to 20. With regard to the use of bronze powders and the risk to health, they had urged that the Government regulations should be rigidly adhered to, so that the distressing effects which sometimes followed the careless use of these powders would be minimised. Research work was going on, and they hoped that both on the lithograph and letterpress side they would soon be able to use bronze inks and eliminate the use of powder altogether. The Health Committee was endeavouring to institute a Government health inquiry, and he hoped that before the next Convention much would have been done in this direction. Referring to the effect of artificial lighting upon eyesight, Mr. Lee announced that this matter was receiving much attention. He thought the committee might seriously consider the matter of venereal disease. When it was known that one in eight were suffering either directly or indirectly through this terrible disease he thought more would be done to prevent and stamp out this terrible thing. Mr. Lee concluded an interesting address by a tribute to the work of the joint secretaries.

Miss I. Forsyth followed, and emphasised the importance of having workshops properly ventilated. If people could only be made to realise the importance of fresh air there would be better health and better work. She urged cleaner windows in workshops. Light was essential to health and work. She hoped the day was not far off when they would have a correct standard of lighting in printing offices. It was easy to think that precautions did not matter, but with regard to those regulating the use of bronze powders, they were vitally important. She appealed to members of district committees to take these subjects back and thoroughly discuss them.

Mr. Valentine Knapp, of the Newspaper Society, referring to the dross container already mentioned, told the meeting that already 300 firms had ordered these containers. The essential thing to insist upon was keenness on the part of everybody to carry out the findings to which they had come. Comparing things now with what they had been they could congratulate themselves. And the sentiment for improving conditions was growing. Things were going to get even better. The members of the Newspaper Society were as keen as anybody else on these health matters, and were also ready to heartily co-operate with the Health Committee in keeping these matters alive.

Mr. Woodgate Stevens referred to members of the printing trade who died from cancer, and wondered what had been done with regard to this.

Mr. Lee said the Health Committee had felt they had no particular data to proceed upon; but they had discussed the matter, and he hoped the National Health Inquiry would soon be set up to deal with this disease.

Mr. T. E. Naylor, M.P., referring to Mr. Lee's figures about consumption and the fact that none of these cases were in the letterpress section of the trade, wondered whether any investigation had been made as to whether there was any particular liability to the disease in the litho and bookbinding trade. He strongly believed that the living conditions of people needed to be considered in relation to consumption.

Mr. Lee agreed with this, and urged that if the vexed question of housing was settled a considerable difference would be found in the health conditions of the workers.

Mr. Appleyard (Middlesbro') appreciated the references which had been made to the work of the late Mr. Thomas. In the only case of death from tuberculosis he had had it was certainly due to bad housing conditions, and not to any evil effects of a printing office.

Mr. Howard Hazell pointed out the danger of incomplete statistics, and told the amusing story of a missionary society which announced that they lost 50 per cent. of their staff in India through malaria. It was afterwards found the staff consisted of two, and one had died!

Mr. Jarrold (Norwich) wondered whether something more could not be done for the incurable consumptive. Such cases were discharged from sanatoria, and, returning home, became a menace to the members of his family.

Mr. Wilson Howes suggested it would provide valuable data if their trade unions would take their statistics for the past five years relating to tuberculosis.

In closing the discussion on the work of the Health Committee, the Chairman congratulated the convention on the fact that he was in the chair. Had he been on the floor of the house he would have said things about consumption which would have made them sit up and take notice. In the next issue of the journal of his own union he was going to publish the statistics of his own society for the past twelve years, which would be of great interest and importance in the consideration of this question.

THE TRAINING OF APPRENTICES.

This was the next subject, and the basis of discussion was the apprenticeship scheme for education and training approved by the Joint Industrial Council in October last.

Mr. J. D. French, in opening the discussion, traced the steps which had been taken to get the

scheme working. There had been considerable difficulty in getting it into operation. The old system of indentured apprenticeship was dying out, and they looked to this scheme to resuscitate it. He himself held that the indenture was essential to the apprenticeship system. The machinery in the present exhibition would suggest that specific training was needed in order to work it. Too often lads were left to pick up the trade as best they could, and when they had finished their apprenticeship were nothing like competent. They wanted to have fully-trained and competent men in the industry. More technical schools were needed, and if the industry as a whole used its influence they could get more facilities for the training of apprentices. The J.I.C. scheme covered all technical training, and a great responsibility rested upon district committees. United effort was indispensable, and he hoped nothing would happen to prevent such action. They were all anxious for the better training of their people—not only apprentices, but learners also. In his judgment all labour to-day was skilled labour, and they had a responsibility for the boys and girls who were brought into the industry for two or three years and then discharged. These blind alleys must be closed. It was a difficult question to handle, but it was a real need that these boys and girls should be taught how to earn a living in the industry.

Mr. W. Howard Hazell then spoke from the point of view of the responsibilities of the employer. The matter could be summed up in the three words—Select, Train, Encourage. The speaker then outlined the process for the selection, training and encouraging of apprentices in their own works at Aylesbury. Any employer was to blame if he did not give to his apprentices the best possible training. Technical education was most essential, however effective workshop training was. The complete training offered was a necessary complement to the best office training. Adequate training was necessary if we were to maintain our commercial supremacy, and employers should be willing to give lads every opportunity for such education. In country towns where there were no technical schools it might be possible to arrange for the visits of trained skilled instructors. Care with apprentices would be a good investment. The success of the industry in the future depended upon the time, care and thought given to the careful selection and training of apprentices.

Mr. G. C. Jones, speaking on behalf of 9,000 women workers, complained that little or nothing was being done for them in the matter of technical education. He thought the lack of consideration toward women from both sides of the Council was a disgrace. He thought it was a wicked thing to keep girls for years putting in on a ruling machine. They ought to have opportunity of doing other and better work, and have some training for it. The women and lesser skilled workers ought to have more consideration.

The Chairman pointed out that the scheme they were discussing included "all learners in the industry."

Mr. G. Harraway congratulated the Apprenticeship Committee on its work. In the old days the foreman did not show apprentices anything, and if he had not learned to set a machine himself he would never have been taught. He supported the plea for more consideration for women workers.

Mr. Eaton Hart spoke very forcefully upon the need for a good standard of general education in their apprentices, and outlined the very successful lines on which they had proceeded at St. Clement's Works in connection with the Wilde Street School. All his apprentices were sent to school in the day time in the firm's time for some hours a week for two years, and were encouraged to go to evening classes also. At 16 the boys had acquired a standard of education equal to that of a good grammar school, in addition to which they had a distinct bias toward the printing art. After that the boys were sent on to a technical school. It might be interesting to those present to hear that nearly the whole management of St. Clement's Press had been recruited from such boys.

Mr. J. R. Riddell (Principal of the London School of Printing) pointed out the difficulty of getting educational authorities to fit their training with what printers desired. So many authorities persisted in giving them what they did not want. It was also very important that places should be ear-marked for boys who were ready to be apprenticed to the trade.

THE CONVENTION LUNCHEON.

Delegates were entertained to luncheon by the Exhibition Council and the organiser, Mr. F. W. Bridges. Mr. Howard Hazell was in the chair, and in addition to those attending the Conference there were present:—The Rt. Hon. Lord Riddell, Rt. Hon. C. W. Bowerman, M.P., Mr. E. E. Alexander, M.P., Mr. D. John (Ministry of Labour), Mr. W. H. Lock (Chairman of Exhibition Council), Mr. F. O. Roberts, M.P., Mr. W. I. Burch (Vice-Chairman of Exhibition Council), Mr. T. W. McAra, and Mr. F. L. Armstrong.

Mr. Howard Hazell, in welcoming the delegates, proposed the toast "Success to the Joint Industrial Council," and congratulated the organisers on such a splendid gathering. The Exhibition itself demonstrated how far the printing trade had advanced mechanically, and that day's convention touched the human side of their industry, and illustrated the many complex problems which faced them. It was a great advantage to both sides when they could thus meet to consider matters pertaining to the well-being of the trade. They were all proud of the Joint Industrial Council. Its progress since the convention at the last exhibition had been most gratifying. Many still had not realised the good work it had done. He considered it was successful because it made no attempt to settle wages. Its work was conciliatory. There was much construction work to be done—health conditions, sanitation, the technical education of apprentices, and also the education of master printers themselves—were some of the things they were attempting. And these were only a few of the subjects which await their consideration in the future. The Joint Industrial Council was the parliament of their industry, and was one of very few in the country which was functioning satisfactorily, and was an example to other great trades in this respect.

Mr. George Isaacs (President of the Joint Industrial Council) replied to the toast, and said it was a proud thing to be able to speak for the printing industry as a whole, rather than for a section or a side. He had always believed in the Joint Industrial Council. They were deeply in-

debted to the Council of the Exhibition and to Mr. F. W. Bridges for the gracious hospitality of that day, and largely for the success of their convention. Mr. Bridges had materially contributed to the work of the Joint Industrial Council from its inception. He built far better than he really knew when he helped them to that position. He thanked Mr. Hazell, as President of the Exhibition Council. Mr. Hazell was an active member of the Council and a true son of his father, and they knew that as President of their great Federation he would use his efforts to secure a bridge between the two parts—the Joint Industrial Council.

The Rt. Hon. C. W. Bowerman, M.P., in proposing "The Visitors," said that he would like to bear testimony to the handsome manner in which the Joint Industrial Council had brought out the best in the human side of the industry. In 1919 there was a committee in existence known as the Betterment Committee, before the J.I.C. was established, and father of the present Council. Some of them would remember Mr. McQuitty's articles in THE CAXTON MAGAZINE. He was the forerunner of the Council, and he was going to thank him as being the pioneer of the movement. They were also indebted to Mr. Johns, of the Ministry of Labour, for assistance in various directions. Others who had rendered assistance were Mr. Milne, of the Ministry of Labour, Mr. Coulsham, from the Board of Education.

Lord Riddell, replying, congratulated the Joint Industrial Council on its great success, and said it was not surprising when they looked at its pedigree —by Isaacs, out of Bemrose and Blades. (Loud laughter.) He said their great trade did not belong to any one section, but to all men engaged in it, whether employer, manager or workman, and the true road to progress was for each to preserve and improve it and show that they knew how to lead in the van of progress.

Brig.-General W. W. Bemrose proposed the health of the Chairman, and said Mr. Hazell had asked him to refer to him only as the representative of Mr. Bridges and the Council, but they were all grateful as a trade for the way Mr. Hazell had worked to improve conditions in the industry and to assist others to do the same, and as employers they were grateful for the work he had just undertaken as President. For many years they had had to thank Mr. Bridges for assistance and encouragement, and now they had to thank him for entertaining them and giving them an opportunity of meeting together there.

Mr. Hazell protested that the toast should have been the Organisers of the Exhibition.

Mr. Bridges, in rising in response to a request for a speech, said he was very proud to speak to them, as he was greatly inspired by such a big gathering. With regard to the parents of the Joint Industrial Council, they were indebted to three or four gentlemen. He described how Mr. McQuitty had sent his article to THE CAXTON MAGAZINE, and the first meeting arising out of the publication of the articles. Mr. Isaacs, Mr. A. E. Holmes, and Mr. T. E. Naylor all worked like trojans for two years to get the thing through. Now they could see the result of some of their labours. Their Council to-day was setting a wonderful example, and the Joint Industrial Council of South Africa was really the outcome of that example. It was even spoken of in the United States and Canada. He hoped they would go ahead and prosper.

Mr. McQuitty, called upon to speak, said how much pleasure it gave him to think his original letter had gone so far, and to realise he was the author of it. It would now be considered the chief plank in the printing trade. He thanked them very heartily for the kind remarks made.

After lunch the conference was resumed. The first discussion was on

THE VALUE OF DISTRICT COMMITTEES.

This was opened by Mr. H. A. Bethell, who urged the importance of a more thorough understanding between various sections of the trade, which could be brought about by the work of district committees. There were in some cases prejudices on the part of employers and employes. Thirty-seven such committees existed, but there was room for many more. There was a great work before these committees. Health conditions might well be fully investigated. They might do even more for the organisation of the Flag Day on behalf of the fund for printers' orphans. To make the J.I.C. a complete success there must be greater activity in the formation of these district committees.

Mr. R. Kneale, vice-chairman of the Organisation Committee, briefly spoke of the district committees as a rank-and-file movement. The J.I.C. as centrally organised had been a great success; but it lacked just that element from the ranks. That was where the local committees offered opportunity; there was an avenue for helpful consideration of all local matters. Some might say that what the trade wanted was not more opportunities of expressions of local opinion. But there were only two ways of doing a thing—considering first and budgetting afterwards, and *vice versa*. The buyer of our products must be understood. It would pay to understand one another. The district committees opened up avenues of understanding. Two courses remained for the future—internecine war, or understanding and co-operation. The J.I.C. showed by far the better way.

Mr. Wildman (Manchester) thought there was timidity in the matter of the formation of district committees, and urged that more propaganda work might be done by the Organising Committee.

Mr. Embleton (London) presented the difficulties of the district committees. If such committees were going to function properly, there must be a better spirit of understanding; petty jealousies must be swept away in view of the real purpose of the J.I.C. He would like to see the district committees holding larger powers.

Mr. Lucas (Derby) reported that they had regular and successful meetings; they had been at work for some years, and excellent, effective work had been done on conciliation.

PEACE IN INDUSTRY.

Brig.-General Bemrose spoke of the contribution of the J.I.C. to peace in industry. Probably this was the most important and far-reaching subject they had to deal with. There would not be any doubt as to what had already been achieved. Many cases had been before the Conciliation Committee, and peace had always been maintained or re-established. The judicial atmosphere which had been created was remarkable and helpful. It had never failed to agree as to the advice which must be offered. It was not claimed that this was altogether the work of the committee. The result was

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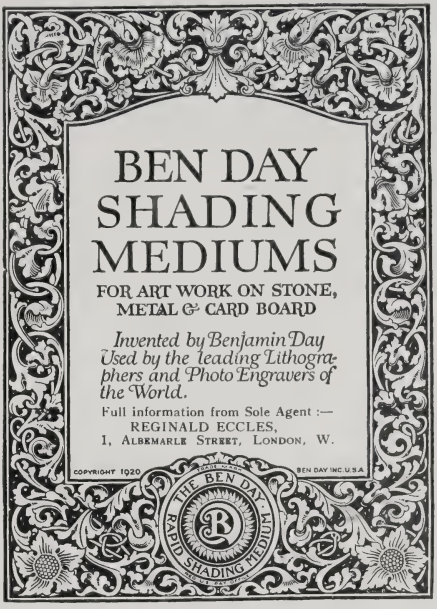
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largely due to the way in which the cases had been presented and the atmosphere in which negotiations were carried on. Recently they had a very difficult case before them, but hope and faith prevailed after three attempts at conciliation. Such a settlement established the reputation of the Conciliation Committee for all time, and induced more trust and confidence from both sides. They wished to be of real value to the industry. If they wished to get better results, the workers must be asked to look at their daily work more as a partner, and the employer must look upon his position from a new point of view. It was no secret that the Employers' Federation was considering co-operation and co-partnership, but without the help of the workers they would get nowhere. The Council owed great things to their joint secretaries. Their personal intervention at critical times was invaluable. The service of Mr. Isaacs was very valuable, as illustrated in the late crisis.

Mr. H. Skinner thought the work of the J.I.C. was still far too little understood, and there was far too great haste to rush into disputes and ignoring the existence of the Council. All troubles could not be settled in a few minutes, but they were improving. It may have been a mistake in building from the top to the bottom, and that made the work of forming district committees more difficult. But there was great goodwill, and there could be no doubt as to the future success of the movement.

Mr. Frank Murrell said he had realised from the beginning the great possibilities of the round-table methods. It was better to think and talk problems out than to fight them out. They claimed to be the best of all J.I.C.'s, but they had still a long way to go. The idea of the Whitley Council had influenced industry as a whole. In 1924 there were 8½ million days lost through industrial disputes. This meant loss of time and increase in the cost of production. The J.I.C. would make this impossible. There were 56 Joint Industrial Councils functioning, covering the activities of three million people, and since their foundation there had not been a serious dispute which had not been settled amicably. The J.I.C. spirit was at work on the Continent, and they would need to realise this when thinking of the competition in the markets of the world. The atmosphere was being created in the printing industry which made rancour impossible. If we could humanise and mutualise business, it would be all to the advantage of industry generally.

Lord Burnham expressed pleasure at being present, and said he believed entirely in the spirit and practice of the round table in industrial affairs. It was to this spirit they must trust in these days of keen competition. The old wages boards missed a great deal of what is essential. If men only meet one another on a mere matter of wages there was lacking much that was present in the Joint Industrial Council. Men must be free to consider social welfare and industrial production as a matter of course. All that is concerned with the processes of output, the conditions of the workshops could be considered in the printing Joint Industrial Council. The pottery trade Joint Industrial Council had been of great service in the adaptation of new processes and the improvement of old methods. He wished this work had been more general. The intention of the authors of the Whitley scheme was that the Joint Industrial Council should be established on the lines of the printing industry. Ideals could not be reached by leaps and bounds—there could be no hard and fast lines—the customs and prejudices of individual industries must be considered, but if improvement was on general and wide lines great good was bound to follow. He might be asked why the newspaper trade had not formed the Joint Industrial Council? It would be acknowledged that there were peculiar difficulties in this direction. Their's was partly an industry and partly a profession, which greatly complicated matters. But he was not satisfied that it was impossible. He was glad to have heard how well things were going with the printing Joint Industrial Council, and that there was no disposition to diminish the extent of its services or repudiate its benefits. His lordship closed a very interesting speech by expressing the hope that they would act as ministers of propaganda, persuading those who are responsible for other great industries to secure for such an institution as this a fair trial. He was an utter disbeliever from any point of view in the prevalent idea of a class war which could only be settled by violent means. He deprecated also the mutual suspicion and mutual fear which, perhaps not unnaturally, were entertained where there was no place of meeting for discussion such as a joint industrial council afforded. Unless there was tranquility of mind in these matters and a real pooling of intelligence and knowledge in industry, then the outlook was bad for the country.

THE STATIONERS' ASSOCIATION

THE members of the Stationers' Association were invited to visit the Exhibition on May 26, and hundreds of them were present. Members of the Council were entertained to lunch, when the following were present: Mr. Percy Barringer (President), Mr. C. Porter (Chairman), Mr. L. Lydall (Vice-Chairman), Mr. G. Delgado, Mr. A. Finburgh, Mr. W. B. Warren, Mr. D. Mackay, Mr. F. Moore, Mr. S. Sandle, Mr. G. W. Lane (Broadstairs), Mr. C. Cox, Mr. Adams Keene, Mr. C. H. Boon, Mr. T. Hodgson, Mr. G. R. Ensom, Mr. A. J. Boyden, Mr. F. T. Rush, Mr. Harry Mead, Mr. G. S. Vivian, Mr. A. Maddison, Mr. J. C. Mather, Mr. Wallis Mansford, Mr. C. H. Martin, Mr. H. Lunbrey, Mr. A. Montague, Mr. N. Green, Mr. Clifton Tollit, Mr. H. R. Marsh, Mr. H. W. Holt, Mr. F. W. Bridges, Mr. K. Bridges, and Mr. Owen-Jones (Editor of THE BRITISH STATIONER).

The President of the Exhibition (Mr. W. Howard Hazell) presided, and in welcoming those present showed a keen knowledge of the work of the Association. In proposing success to its work, he said he thought the constitution of the Association, with its combination of manufacturers, wholesalers and retailers, a most admirable arrangement and worthy of consideration by other branches of the industry. He offered congratulation to the Association on retaining its President for eleven years, and admiration of Mr. Barringer for the unique service he rendered to the trade.

Mr. Barringer responded in a few sentences, but found opportunity even then to acknowledge the service Mr. Hazell had rendered to them as stationers by persuading the Association of Diary Publishers to nx the present time limit for the sale of their diaries at reduced rates.

Mr. Charles Porter proposed success to the Exhibition, and called attention to the very creditable stationery show which was made.

Mr. F. W. Bridges, in responding, returned to a fixed purpose of his—that of a great exhibition where the printing and stationery trades should really be fully represented. While the exhibition was representative of the printing machinery trade as no other exhibiton had been, the stationery trade might have been even more represented than it was. The available space, moreover, was all occupied, and that pointed to the only other suitable place for an exhibition in London, and he hoped they might henceforth have in their minds a really great and representative exhibition embracing every section of the allied trades.

Mr. S. Sandle felicitously proposed "The Chairman," remarking what an asset it was to the printing trade and industry generally to have such a leader in their midst.

A very large and representative company of stationers assembled in the Berner's Hall for tea, and there was great satisfaction expressed at the opportunity which had been given them of visiting the Exhibition, and the kindly hospitality of the management.

MASTER PRINTERS' FEDERATION DAY

ON Thursday, May 21, members of the Master Printers' Federation were invited to spend the day at the Exhibition. The Council was entertained to lunch, and all members who attended were offered tea.

At the luncheon Mr. Howard Hazell was in the chair as President of the Exhibition. Others present included Mr. W. B. Wykes (past-president of the Federation), Mr. Stembridge (vice-president), Sir Cecil Harrison, Mr. R. A. Austen-Leigh, Mr. E. Unwin, Col. Barrell (Portsmouth), Mr. R. D. Ruddock (Lincoln), Mr. Potts (St. Leonards), Mr. Dennis (Scarborough), Mr. Silk (Birmingham), Mr. A. Langley, Mr. Bethel (Manchester), Mr. Hanson (Ipswich), etc.

The following overseas visitors were also present: Mr. Philip Dodge (New York), Mr. R. Allister (President, South Africa Master Printers' Federation), Mr. Knightly (Government Printer, Pretoria), Mr. Jos. King (Australia), Mr. De Boltze (Lagos), Mr. Torias (Peru), Mr. Riches (Zanzibar), Mr. D. Mulcher (Bombay), Lieut.-Col. Willis (Delhi), and Mr. Innes (Melbourne).

Mr. Howard Hazell, in proposing "The Federation of Master Printers," said the exhibition made for the increase of efficiency—which he defined as producing in the shortest time, by the best methods and at the least cost, the goods the community desired to buy. The exhibition allowed them to check the rather superlative statements of sellers of particular machines and make a comparison between many. Printers could be divided into those below average efficiency, those of average efficiency, and those above. Those below were always complaining of bad trade and cutting and prices, and sooner or later drifted to the bankruptcy court. Those of average efficiency grumbled like Englishmen, while making small profits, saying they were making none, retained their position and hoped to improve it; those above average efficiency would never admit they were making big profits, but admitted trade might be worse; they used all the latest machinery and processes, their factories were always full, making good profits, and customers went to them not because their prices were low, but their efficiency high. The exhibition was an excellent opportunity for printers to place themselves in the third category. They would have a large reward.

Mr. J. A. Stembridge (vice-president of the Federation) replied to the toast, and referred to some of the many phases of the activities of the Federation.

Mr. R. A. Austen-Leigh gave the toast of "The Visitors," and said one of the most agreeable bye-products of this exhibition was the bringing together of their rivals and competitors, or rather their colleagues and confréres, from overseas. They had with them representative printers of France, the home of Garamond and Plantin; Holland, the birthplace of the Elzevirs and Didots; and of the Far West, who gave them Franklin and Bruce Rogers, Mergantheiler, Lanston and Hoe. Representatives were also present from India, Sweden, Zanzibar, Peru, South Africa and Australia. He hoped they would enjoy their visit and make profitable use of it, and return home having left many orders behind them, to find their factories full and their profits many.

The toast was responded to by Mr. Robert Allister (South Africa), who expressed appreciation of the help given to their South African Federation by their British organisation. They in South Africa had gone a little further than most in that they had registered their national agreement under a Conciliation Act making it compulsory for every master in the country to pay standard rates of wages and work a definite number of hours. They had now full control of their own industry, and as to apprentices the Joint Industrial Council had power to decide before a lad was indentured whether the master had the necessary equipment for his training. The Exhibition had been a great education—he himself had attended it every day, and he hoped to take back with him valuable information to the members of his federation, as well as his own business.

Mr. Philip Dodge also replied to the toast, and regarded it as a great honour to attend a meeting of the greatest federation in the printing world. He rejoiced in their common sentiment. The fact that their sons and brothers stood together on the firing line in the great war had made a mighty difference to feeling about Great Britain in America. They were one people, with common aspirations. English-speaking people had to stand together as one. The exhibition was a notable illustration of the mechanical advance made in their industry. Mr. Dodge then outlined the great opposition and enormous financial outlay involved in the production of the early typesetting machines. But struggle had done them no harm. Co-operation was now needed throughout the world. He was struck with the way in which they in this country conferred together for their common interests.

Mr. W. B. Wykes extended to the Chairman and Mr. F. W. Bridges the thanks of the company for their hospitality.

Mr. Bridges, in reply, reminded those present that for 25 years he had been working for the benefit of the printing industry, and incidentally this has benefited himself. He gratefully acknowledged the great benefit the hearty co-operation of the Fedration in these exhibitions had been, and heartily wished it increasing success.

LONDON MASTER PRINTERS

THE London Master Printers' Alliance was entertained on Tuesday, May 27. A large number of London printers were in attendance. Members of the Council were entertained to lunch, amongst whom were: Messrs. A. Langley (president), R. A. Austen-Leigh, E. C. Austen-Leigh, J. D. Wise, R. F. Truscott, G. F. Tomkin, J. Graham Williams, Edward Unwin, John Burt, W. J. Mizen, and W. Whyte (secretary). Other guests included Mr. Lock, Mr. Burch, Mr. Boulton, Mr. John Fry, and Mr. R. B. Fishenden.

Mr. Howard Hazell presided, and made another of his illuminating and interesting speeches in proposing success to the Alliance. He pointed out that it was an economic fact that where wages were high—as in London—efficient machinery was used more than where wages were low, so that those present would be particularly interested in the Exhibition. High wages ought to mean high efficiency on the part of the employe, and they should give to their workmen the best machinery they could get. London was the largest printing centre in the world, and he would like to feel sure it was also the best.

Mr. Alfred Langley, in responding, used the opportunity for a little self-examination and criticism. They had done remarkably well in London so far as organisation went, but he wondered whether they had increased in efficiency to a similar degree. Their field was very wide, and the scope for further development was very great, and he would like to see the work which they as an association should do accomplished. There was a great need for far more energy and enthusiasm amongst their members. The apathy of many of them was appalling, and if they were to reach the ideal of completely governing their industry things would have to change. They had other important things to think of than wages, and he would like to see the team-spirit created.

Mr. R. A. Austen-Leigh proposed the health of "Caxton's Successors in London," and was very amusing in attempting to identify these particular gentlemen, generously ending, however, by claiming that all present were entitled to that proud claim.

Mr. Edward Unwin, sen., replied, and in a very gracious reminiscent speech said he hoped they were all emulating the work of the great master of their craft. Caxton's chief desire was to use printing for the benefit of mankind, and that ideal they might well keep before them.

Mr. R. B. Simnet proposed "Our Hosts," and very worthily acknowledged the increasing debt the trade owed to Mr. Hazell; he also paid very gracious compliments to Mr. F. W. Bridges.

The Chairman and Mr. Bridges acknowledged the toast.

Later in the day members of the Alliance were entertained to tea in the Berner's Hall.

PRINTERS' PENSION CORPORATION DAY

A PARTICULARLY pleasant function was held at the International Printing, Stationery and Allied Trades Exhibition at the Royal Agricultural Hall, London, on Thursday, May 28th, when about 800 aged pensioners and some friends sat down to a well-served high tea as the honoured guests of Mr. F. W Bridges, the General Manager of the Exhibition.

Mr. C. J. Drummond, M.B.E., J.P., Deputy-Chairman of the Council of the Printers' Pension Corporation, occupied the chair, in the unavoidable absence of Mr. James Thompson, Chairman of the Council. In highly appropriate terms Mr. Drummond conveyed to Mr. Bridges the sincere thanks of all present for his generous hospitality.

Mr. F. W. Bridges, in a very happy reply, said it gave him intense pleasure and satisfaction to meet so many members of the craft. He recalled several incidents relating to the first exhibition twenty-one years ago. He hoped all would have a time of real enjoyment.

At this stage of the proceedings Sir Herbert Morgan, K.B.G., accompanied by his daughter (Miss Gwenyth Morgan) and the Hon. Mrs. St. Aubyn, honoured the meeting with their presence. They were loudly cheered as they proceeded to their seats.

Mr. Joseph Mortimer, Secretary of the Printers' Pension Corporation, voiced a warm welcome to Sir Herbert and his party. (By the way Sir Herbert will preside at the Corporation's festival in November.) It was, said Mr. Mortimer, more than good of the President-elect to come to the tea. He was sure he was expressing the feelings of all present in wishing success to Sir Herbert in his new sphere of labour. Proceeding, Mr. Mortimer said he was going to ask Miss Gwenyth Morgan and the Hon. Mrs. St. Aubyn to accept bouquets from the hands of three little orphan girls, who represented the 900 children left orphans through their fathers being killed in the Great War, these 900 boys and girls now being looked after by the Printers' Pension War Orphan Fund. Amid much cheering these bouquets were then handed to the two ladies.

The Hon. Mrs. St. Aubyn, in graceful and eloquent words, acknowledged the presentation, saying that she was deeply interested in the work of the Corporation, and wished it long and continued success.

On behalf of his daughter, Sir Herbert Morgan read a little topical couplet she had composed to express her thanks.

Sir Herbert, who was enthusiastically received, then said it gave him the greatest possible pleasure to be present, and to see how well his

friends looked. He was deeply interested in all branches of the Corporation's noble work, and it was his intention at no distant date to visit the Almshouses at Wood Green. Mr. Mortimer had referred to his presidency, and he could assure his hearers that he was proud to occupy the position and to follow in the footsteps of such illustrious men as Charles Dickens, Mr. Gladstone, and our present King.

A varied programme of vocal and instrumental music followed the tea. This gave unalloyed pleasure to all who listened. Mr. Dick Lewis was musical director, and Mr. Ernest Jose was an able accompanist. This concert was kindly provided by the organisers of the Exhibition.

In every respect the gathering was a notable one, and it will long linger in the memories of all privileged to be present. Praise is due, and is hereby accorded, to all who were in any way responsible for carrying out the arrangements.

A large number of the members of the Council of the Printers' Pension Corporation, together with their ladies, were among the gathering. The evident enjoyment of the aged pensioners must surely have amply repaid the Council men for devoting many hours of labour, week in and week out, on behalf of the sacred cause of this prominent and progressive trade charity.

PRINTERS' MANAGERS' AND OVERSEERS' ASSOCIATION

A LARGE and representative gathering of this Association met at the Exhibition on Saturday, May 23rd. There was a delegate meeting in the morning, after which about 150 members and ladies assembled for luncheon in the Grand Saloon, when Mr. F. W. Bridges and his son, Mr. K. W. Bridges, were the principal guests of the Association. In the chair was Mr. R. H. Berry, President of the Association.

When the time came for speeches Mr. Berry proposed the toast of "The Exhibition Organiser," and gave very cordial expression to the Association's appreciation of Mr. Bridges' kindness to the Association, particularly his having provided them with a place in the Gallery, which they could use as a rendezvous for meeting each other and for missionary work on behalf of the Association.

Mr. Bridges, in the course of his reply, referred to a 27 years' acquaintance with the Association, and recalled that this was the seventh occasion on which he had met them in similar circumstances. He bore testimony to the progress made by the P.M. and O.A., and the many fine men who had served the Association in official capacities. He said, too, that in the course of his travels abroad he had found evidence that firms in all parts of the world were looking to the P.M. and O.A. to provide men capable of running their printing offices.

Mr. K. W. Bridges, in proposing the toast of "The Association," spoke in very high terms of the importance of printers' managers to the Exhibition, and of their sound knowledge and judgment in respect of all that the exhibitors and salesmen had to offer. He coupled with the toast the name of the General Secretary, remarking that the hard work and courtesy which Mr. Whittle had shown had made it a pleasure to be associated with him.

Mr. Whittle was given an enthusiastic reception in making brief response on behalf of the Association

Mr. A. H. Wilson proposed the very popular toast of "The President," and Mr. Berry's reply brought the luncheon to a close.

TEA AND CONCERT.

The day's big function from a numerical point of view took place in the evening, when something like 700 ladies and gentlemen assembled for high tea and concert in the Prince's Gallery. At tea the visitors were the guests of Mr. F. W. Bridges.

JOBBING GUILDS RE-UNION

THE LAST OFFICIAL FUNCTION AT THE EXHIBITION.

ON May 30 there was a happy gathering of the "clans" at the invitation of the President, Council and Organising Manager of the Exhibition, officially named "The Guilds Re-union." Formal introductions were dispensed with, the spirit of comradeship being fully in evidence right throughout the whole proceedings.

About 120 sat down to tea, and a jolly company it was, composed of husbands, wives and sweethearts. It is good for the ladies to be able sometimes to be afforded an opportunity of understanding and getting into contact at first hand with the work and studies of their male folk, and no more fitting occasion could be made than for them to be taken round such a fine exhibition as was to be found at the Agricultural Hall, and then for them to be afterwards given an insight into the social side! About fifty ladies gladly seized the opportunity, and they were not disappointed.

Mr. F. W. Bridges, the Exhibition Organiser, acted as chairman, and, after tea was over, made a happy little speech of welcome, which instantly made everyone feel "quite at home."

He then called upon Mr. Alfred Langley to address the gathering, who, in a few apt phrases, expressed the appreciation of the London Master Printers' Association at the efforts put forward by the Guild for betterment of craft. He was also glad of the opportunity of paying a tribute to the services which Mr. H. Naylor (hon. secretary of the L.S.C. Jobbing Guild) had rendered to the L.M.P.A. in connection with some of their district competitions, and particularly with regard to the Exhibition of Specimens submitted in the L.M.P.A. Inter-district Competition, which were on view in that Hall.

Mr. Langley also referred to a very pleasant evening spent with the L.S.C. Jobbing Guild when he gave a lecture on poster work earlier in the year, remarking that in thirty minutes he learnt more from the running fire of comment and criticism which followed than he would have done in as many months in his own office.

Commenting on the wide range of exhibits, Mr. Langley said he had searched in vain for any mechanical contrivance that would provide a suitable range of poster types. As to what the future might contain he would not venture to prophesy. As to how far mechanical contrivances and photography would supersede hand labour in the future, it would be difficult to forecast; but of one thing he felt sure—there would always be a demand for men able to produce beautiful typography. (Loud cheers.)

Mr. T. E. Naylor, J.P., M.P., proposed a vote of thanks to the President, Advisory Council and Organiser for their invitation. Mr. Bridges, he said, was always ready to associate himself with all good movements in the printing and allied trades, and he was one of the earliest supporters of the J.I.C. He was an excellent friend of the Guild movement, which was now making great headway and spreading all over the country. Referring to the Exhibition, Mr. Naylor said one found there a practical expression of that for which the Guild movement stood, and he questioned whether any kind of machine, letterpress or litho, would ever be able to displace the natural skill and intelligence of the craftsman. He had yet to find the machine that could set an ordinary circular without a man to operate the keyboard. Inventive genius would no doubt continue to make great strides, but he questioned if it would ever give them a machine that would entirely prevent the skilled craftsman exercising his powers in connection with or supplementing it.

Mr. Geo. Eaton Hart, in seconding the vote of thanks to Mr. F. W. Bridges, also referred to the Exhibition as an excellent medium for improving one's knowledge of the craft, and he was confident that Guild men had not been slow to realise this important fact. They were able to see what developments were taking place, and how far such improvements and new methods of production would be liable to affect their working conditions. Mr. Hart was convinced that, whatever machine was introduced from time to time, the craftsman would still be required to put into type the thoughts of mankind. There must be an improvement in machinery, and there should also be a corresponding improvement in the human element—it was this latter, he thought, which was the direct concern of the Guilds; and they should also interest themselves in the education of the boys and girls entering the trade, that they should receive that standard of education which would help to efficiently equip them for executive positions. Mr. Hart concluded by expressing to Mr. Bridges, on behalf of the Guild movement, their grateful thanks for the work he had done in the interest of the craft.

Mr. F. W. Bridges was given a most cordial reception on rising to respond. On behalf of the President, Council and himself, he expressed what a great pleasure it was to meet once again under such circumstances the friends and supporters of the Guild movement, and in happy phrase he congratulated them on the splendid work they were accomplishing. He had attended twenty different functions in connection with the Exhibition, but, although this was the last one prior to the close of the whole Exhibition, it was by no means the least in importance. One excellent feature which, he said, should not be passed without notice was the large number of working printers who had come along to inspect in detail the latest improvements and devices, and it certainly seemed as if they had shown more interest generally than the employers.

Mr. Bridges also announced the results of the two competitions for which prizes had been put up by Major Astor. The prize for the best letter heading (competition for Guild men only) was awarded to Mr. F. Harvey, of the L.S.C. Jobbing Guild—with Messrs. McAllan & Co., Ltd. The prize for the best circular was awarded to Mr. Albert E. White, of Kennington—this was an open competition. Whilst regretting the comparatively few entries, Mr. Bridges expressed the hope that on future occasions it may be possible to so arrange matters that a much wider response would be assured.

Mr. H. Naylor (Re-union Hon. Sec.), in response to the invitation of the Chairman to say a few words, was very brief and to the point. He regretted deeply the unavoidable absence of Mr. G. W. Jones, a vice-president of the London Guild, whose splendid collection of early printed specimens and books (on exhibition downstairs) were a delight to connoisseur and student alike. Guild men everywhere, Mr. Naylor went on to say, fully appreciated the moral and practical help accorded to the movement by all who were in the position to do so; and it was up to Guild men to extend support to those who were in need of their help; and he thought one good way of putting this to the test was by making a collection on behalf of the trade charities, to which the gathering generously responded.

Mr. C. J. Drummond was next called upon to say a few words of welcome to the visitors, including with them Mr. J. R. Riddell, Principal of the London School of Printing. As president of the London Guild since it was founded in 1909, Mr. Drummond paid a glowing tribute to its workers from inside knowledge, making particular reference to the advance made in the arrangements for carrying on technical education since he first knew the trade, concluding his remarks with a fine tribute to the work of the L.S.P.

Mr. J. R. Riddell suitably responded, mentioning at the same time the widespread influence of the Guild movement, particularly in the provinces, where the Guilds embraced the work of several departments in their curriculum.

Interspersing the speeches were musical items contributed by Miss Myddelton (pianist), musical monologues by Mr. Alan Peacock, and a sleight-of-hand entertainment by Mr. Syd. Murray (" the gay deceiver "), all of which was heartily enjoyed.

" Auld Lang Syne " brought an important event in the Guild movement to a successful conclusion.

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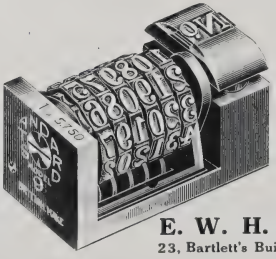

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AND MANY OTHERS

IN addition to those we have already mentioned, some association or other was being entertained at the Exhibition every day. In every case great appreciation for the hospitality of the management was expressed. The number of these trade associations and clubs is an evidence of the many points of business life touched by the printing industry, and the interest shown in the many features of the great show will, we are sure, all have their good effect upon business. Here is a complete list of the official visits to the Exhibition, including those which are more fully reported elsewhere :—

Saturday, May 16.—The Printing, Bookbinding and Kindred Trades Overseers' Association.

Monday, May 18.—The Worshipful Company of Stationers.

Tuesday, May 19.—The British Photographic Manufactures' Association.
The Periodical Trade Press and Weekly Newspaper Proprietors' Association, Ltd.

Wednesday, May 20.—The Joint Industrial Council of the Printing and Allied Trades of the United Kingdom.
The Federation of Master Process Engravers.
The Master Bookbinders' Association.

Thursday, May 21.—The Federation of Master Printers of Great Britain and Ireland.
The Master Bookbinders' Association.
The United Kingdom Paper Bag Association.

Friday, May 22.—The Newspaper Proprietors' Association, Ltd.

Saturday, May 23.—The Printers' Managers' and Overseers' Association.

Monday, May 25.—The Kent Newspaper Proprietors' Association.
The Electrotypers' and Stereotypers' Managers' and Overseers' Association.

Tuesday, May 26.—The Stationers' Association of the United Kingdom.
The United Bill Posters' Association.

Wednesday, May 27.—The London Master Printers' Association.

Thursday, May 28.—The Printers' Pension, Almshouse and Orphan Asylum Corporation.
The Publicity Club of London.

Saturday, May 30.—Jobbing Guilds' Re-union.

A concert was given on Wednesday, May 27, in aid of the funds of the Caxton Convalescent Home, which was very well attended and thoroughly enjoyed. It is to be hoped and expected that this and other trade philanthropic associations will have made many new friends and secured their interest and support during the period of the Exhibition.

The Orchestral Band of the London Society of Compositors played during the daytime, and the Military Band of the same society every evening, and their performances were greatly enjoyed.

The Work of the Schools at the Exhibition

NO better proof of the progress that has been made in technical education can be afforded than by the admirable exhibits that were contributed to the 1925 Printing Exhibition. It is a matter for regret that all the schools were not represented, because the spirit of competition is an encouragement to students and teachers alike, and an occasion such as the Printing Exhibition affords an opportunity to compare the work that is being done in different centres.

Specimens of work were sent in by the London School of Printing, the L.C.C. School of Photo-Engraving and Lithography, the Camberwell School of Arts and Crafts, the Bradford School of Arts and Crafts, and the Maidstone School of Arts and Crafts.

The London School of Printing had a magnificent show covering a whole range of subjects from type lay-out to colour printing, offset and bookbinding. The aim of the School is to give every exercise a practical application, and to reproduce as far as possible, in the school, the routine and atmosphere of the workshop. The success that the school is attaining and the excellence of the examples, show that in every department the training is sound and practical and directed towards the needs of the majority of printers in London. In display there is no characteristic style, to which a label can be affixed, but the standard of straightforward commercial work. In poster design a number of highly successful specimens were exhibited that are as good as posters from the point of view of design and also from that of their direct advertising appeal.

The capacity of a printing school to advertise itself may be taken within limits as a measure of its ability to train the students so that they may be able to set posters or advertisements in a manner that will achieve the desired results.

The full sheets of colour work were in every way satisfactory; if colour printers are to be trained, they must be trained on large sheets, including blocks which require varying treatment, such as those that are met with under ordinary shop conditions. The elementary training of junior apprentices is an essential part of the scheme of technical education; but the training of students to do first-class colour printing is of equal, and perhaps more, importance.

The best specimens in offset printing were monochrome reproductions of etchings, but the few specimens in colour were of almost equal merit. The machine ruling was sound, and some pleasant examples of paper marbling were exhibited.

The display of the specimens in this exhibit was most creditable, and the lettering on the sign was an example that might well have been followed by some of the other exhibitors.

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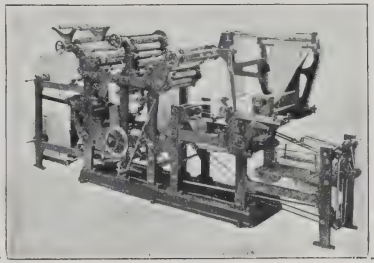

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The exhibit of the L.C.C. School of Photo-Engraving and Lithography was a commendable one. There were some excellent specimens of line engraving in colour from drawings specially prepared in the school for the process. Colour work of this kind is good for book illustration, and is easy to print. The colour blocks were shown in the same frames as the originals, and certainly gave a close rendering of the colours. All the standard processes were shown, including some good photogravure, but not much in photo-lithography.

The original investigations on the colour of three-colour inks were illustrated by means of diagrams showing the differences that occur in inks of varying hues, and also the effects of over-printing. But work of this kind does not convey much to the ordinary printer, although he would be glad, no doubt, to avail himself of the improvements which researches of this kind should make possible.

The Camberwell School of Arts and Crafts showed a small collection of excellent type specimens in the style which is characteristic of this school, and in addition a few examples of book-binding. "Camberwell" should have sent a more comprehensive display.

The other educational exhibits were small, and the schools did not do themselves justice. We hope that on the next occasion a thoroughly representative collection of educational exhibits will be submitted.

On Exhibitions in General

DURING the recent International Printing Exhibition we were introduced by a friend to a man who had very decided ideas not about organising exhibitions, but about exhibits and exhibitors. We could not gather his complete arguments, but his ideas were certainly Utopian so far as trade exhibitions are concerned. The trend of his argument was that an exhibition should be a unified whole, and not a collection of units.

In the reconstruction of Regent Street each building is being made to conform to a general scheme, and although each one possesses a marked difference in detail, in no case is the architect permitted to depart from the general idea of uniformity, and as a result the new Regent Street will present a collective dignity that will be of the greatest value to each individual establishment.

It should not be difficult to realise that there is a distinct parallel between the design for Regent Street and the general scheme of design for an exhibition. There could be no doubt that an exhibition in which the stands all conform to a general scheme as regards their design, adds greatly to its power of attraction, even though the difference of the effect that is produced on visitors should be a sub-conscious one. Many of the groups of exhibits at Wembley showed what could be done by collective effort in the matter of the design of stands and in their decoration, and some of the exhibitors at the Printing Exhibition showed that they have already realised the advantages of applying the simple principles of good design and the use of good lettering to the construction and decoration of their stands.

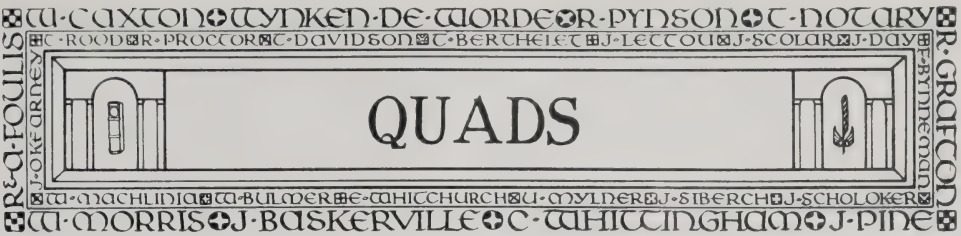
A great deal of money is invariably expended in the construction of exhibition stands, just as in the architecture of public buildings, offices or dwelling houses, money is thrown away on so-called "decorations," which consist of mere vulgar excrescences and disfigurements. A simple stand of decent proportions gives the exhibits a better chance than one that is covered with unnecessary "ornament" in such a degree that the spectator's attention is detracted from the exhibit itself on account of the over-elaboration of its housing. If a stand is to be built four square with a sign round the top, why should it be necessary to fill in the corners with fretwork bracket supports? They mean nothing, and certainly have no claims to beauty.

An exhibition should certainly have a properly considered collective colour scheme. Signs of all shapes and sizes and of varying unattractive colours are repulsive, and are of no assistance to those who display them. They produce the same kind of effect that would result if the salesmen all shouted the merits of their wares as they do at a country fair. In the nature of things exhibitions are tiring to the visitor, and everything possible should be done to create an atmosphere of rest in order to retain his energy for the inspection of the exhibits.

After all that has been said and written in the printing trade about beauty of form in lettering, it seems strange to find so many exhibitors contenting themselves with sign writing that was considered satisfactory in good Victorian days! Why should we not all be content with one or another of the pleasant yet honest modification of the simple Roman form? No complaint could be made of lack of variety to choose from, and the result obtained would soon prove the wisdom of such a choice. Whilst on the subject of lettering our expert friend was not too kind in his remarks about the official number cards that were supplied to the exhibitors.

After discussing the stands our critic went on to talk about the display of the exhibits themselves. On this subject the machine makers undoubtedly scored; no frills or trappings, just a simple tidy black-and-white linoleum on the floor which did not show the dust, and the machines themselves possessed the beauty that belongs to efficiency. Where smaller articles have to be displayed, we were shown that the usual tendency is towards overcrowding. It is generally customary to crowd a stand with goods like a warehouse, with the result that a visitor is either not attracted or is bewildered. A few items of importance, well displayed, will go further towards making a good lasting impression on the visitor than a whole mass of articles that he can only spare the time to glance at most casually, and the exhibitor will find that by a thoughtful discrimination of the goods displayed he will be far more likely to reap the reward he seeks.

We hope to obtain some more definite constructive ideas from our critic on the subject which he merely touched upon in the little talk we had with him, and these ideas we hope to be able to put before our readers in a future issue.



THIS is Derby Day. It is with me as it was with the Oxford professor who went to live among the racing fraternity of Newmarket. "My ideas," he said, "are becoming dreadfully ossified." If, therefore, Quads this month are worse than usual you will understand why.

NOT that one ought to become ossified exactly after drinking and bathing in Buxton waters at the Master Printers' Federation meeting. Mr. W. Sessions and I had a short swim together in a so-called natural thermal bath, the water registering 82 deg. It should have done wonders for both. It certainly did for him. The Buxton spring water, as I read, is distinguished for a rare lot of nitrogen and carbon (something or other) oxide; the exact prefix to the "oxide" I forget, and had better be careful about it. It didn't seem any too cheerful reading up to that point. But I went on and read about radio qualities in the water, and helium and argon and other jargon. So I daresay it's all right. Only the trouble was that it was Sessions, with his usual luck, who got all those radio, helion, etcetera, bubbles, and radiated off their effects in his Costing Conference speech.

THE Buxton Federation meeting was a great success altogether. It started well, and went well throughout. The Sunday service was very well attended. Canon Scott-Moncrieff told the great company of master printers, who did so much to fill the Parish Church, that the old square tower had had nothing spent on it for a hundred years, and must now be re-pointed at great expense.

WHAT a pity some printer hadn't met him and told him to say that his tower was "old body," and that they were "turning to point."

FOR his discourse the canon had worked up early printing. He was a bit hard on Caxton, whom he seemed to credit with thinking of printing as merely a new convenience for the world. Caxton certainly was not the great printer his continental predecessors and contemporaries showed themselves to be. But then he started late in the century, and late in his own life, and in a country in which general culture was painfully to seek. Wynkyn de Worde, his apprentice and successor, whom the canon rather praised by contrast, was surely not to compare with Caxton, who was a scholar and a literateur. Wynkyn de Worde could reproduce a book with a page missing, and not know it.

THE canon's reminder that Queen Margaret, the grandmother of Henry VIII., was a fine patron of printing, was timely and welcome, and may yet in some way be turned to account, if only in connection with some social enterprise, some dignifying of our craft benevolent activities.

MR. RUDDOCK, of Lincoln, the President of the Midland Alliance, when he welcomed the members on Saturday evening, quoted two passages from the "Quads" in the May CAXTON. One of these, about the high places of life, he thought derived from Job. No, it was from that puzzling and finely inspired writer called Habakkuk.

PERSONALLY I'm fond of old Job. One loves him for his resolute independence, his combative, uncompromising self-vindication. I suppose, too, we all get tired at times, and then can sympathise with his "Have pity on me, have pity on me, O ye, my friends." And his appealing protestation, "Is my flesh the flesh of brass?"

WHAT poignance, too, and what pathos, and what truth to life, in the description of that great drama of the unemployed man—driven into the army as the only thing he can do, and particularly worried by the fear of his children missing all youth should mean, and failing, like himself, in later life. "He wandereth abroad for bread, crying 'Where is it?' He is waited for of the sword . . . He thinketh he shall not return out of the darkness . . . And his branch shall not be green. He shall shake off his unripe grape as the vine, and cast off his flower as the olive."

IT'S been hard enough in the printing world to keep down the number of unemployed. It is incomparably harder in some other industries. It is our craft's high privilege to give some lead in the whole field of industry, and we probably could do in the future a great deal more in leadership than we have yet thought possible.

MR. WYKES, the outgoing President of the Federation, struck just the right note at Buxton regarding the printing craft's Joint Council. Before the recent trade negotiation with paper workers and binders the Printing Joint Council already, he said, stood head and shoulders above all other joint councils. After that successful conference the printing craft's Joint Council stood higher than ever.

NATURALLY, the prevalent Buxton mood at Buxton was one of confidence, not to say elation. But there was just one warning note. The

number of apprentices coming into the craft is not adequate. Printing is suffering from "apprenticitis."

Well, the Federation considered the matter after a speech on the subject by the new President, Mr. Howard Hazell, and there will be a collating of facts and figures regarding the number of lads coming on to be our future journeymen. The Federation urges employers everywhere to take on all the apprentices they are entitled to put on under present agreements with the unions, and it is ready to raise the whole question as to whether the ratio of apprentices to journeymen at present recognised is such a ratio as will ensure an adequate number of journeymen in the future.

How all these questions inter-penetrate; questions, I mean, of population, of supply and demand, of organisation and of technique. I'll come back to Buxton, but let me just interpolate here how, after the Buxton meeting, I walked about the hall at the Exhibition and heard one after another forecasting possible developments in the adoption of some offset process in lieu of present letterpress, or some phototype composition method, or some method at any rate of printing by light, and doing without the compositor.

The Typon process in particular seemed likely to many to have an important future, and, to that extent, to indicate a reduction of letterpress composition. I have deprecated panic on this score. But that photography will some day do a great deal in future book production I do not doubt.

Mr. Sessions had taken great pains with his paper upon Organisation in Relation to Cost Production. He led us into a very wide and fertile field of thought. Just one point here anent. I had just come from one large works where day by day time was being lost because the way in which the machines had been installed had not proved to be that which was ideal for the particular kind of printing which latterly the firm had most been called upon to produce. It was constantly happening that jobs were, in common phrase, turning their backs upon themselves, winding about as some rivers wind about where the peculiarity of the soil compels them almost to corkscrew. The chairman of this great printing company was lately walking through the works with his manager and noting this untoward arrangement, simply said, in his short business-like way, "Shift the machines." "I didn't wait for him to tell me that twice," the manager told me afterwards with a chuckle; I had it all done straightaway." Rather costly at the moment, but it was real and fine management; it meant effecting a substantial economy thenceforward.

Our friend Sessions did splendidly with the graphs, and the little humorous sketches which he had prepared on a folder and had placed in the hands of all his listeners so that they could better follow his address. What he said was the result of a lot of observation, experience and thinking. He well deserved the long and loud applause that expressesd the meeting's thanks.

It's a very good thing that paper standardisation is fairly set agoing at last. The matter has been talked about long enough. A very large part of the credit of initiating it belongs to the well-known West London printer, Mr. W. J. Pollock. He, bytheway, has worked in the craft in the United States. He has also been a traveller to, I think, South Africa. He is altogether a much observing and a capably reflecting man, he has served us all very well already, and will do much more for us yet, and hold, I hope, high office.

Mr. Howard Hazell took up paper standardisation two years or more ago, and has assisted the campaign with his usual lucidity and persistence. But these and any other would-be paper standardisation reformers encountered, if not exactly friction, at any rate a considerable force of sticktion. The time had come for a definite move to be made.

In the United States twelve years went by after the Civil War ended before gold payment was resumed, and this might not have happened even then, but that someone, tired of so much talk about "how" to resume, startled his friends by saying "the proper way to resume is—to resume."

The proper way to standardise paper is—to standardise it; that is, for the buyers to say what it is they definitely want, and what they mean to have. This is what the Buxton meeting has done.

Col. Stephenson, of Stephenson & Blake, lives near Buxton. It would have been in the fitness of things for him to submit an appeal for assistance to the Benevolent Fund of the Federation. He could have supported it in person by an appearance in a very seedy coat and a very woe-begone expression. Instead he passed them the compliment of greeting them as one business man addressing other busisness men, as one good "coster" who had done well speaking to other costers who at long last were beginning to do well. This prosperous typefounder, this ex-Member of Parliament, this pro-Chancellor of Sheffield University, and head of the local Gas Company, was quite pleased to let the members see what a comfortable home a typefounder might possess. He invited them all to visit him at Hassop Hall, and great numbers went. Hassop Hall is a noble Elizabethan mansion, gloriously situated, I suppose some twenty miles from Buxton, Col. and Mrs. Stephenson and Mrs. and Miss Blake were delightfully hospitable and welcoming in their reception. The weather was tolerable, though not perfect. There was bright music by a band on the lawn, and the grounds spread out gloriously in their panorama.

I was fain to beguile one after another to come to the spacious old brew house; I enticed them under promise of an undoubted thrill. In this brew house (Elizabethan apparently, like the rest) there was a gallery half across the area. Upon that gallery, at its edge, upreared, what I could only call a gallows, or two gibbet-like erections. They served, I presume, for raising barrels, though there was no sign of such lifting tackle. "This is the execution chamber" I told my

friends. "Any printers here who complain of their type costs, find that such complaining is a hanging matter. And you see this little mouldy boat"—for though the ornamental lake was a hundred feet or more below, a small boat, mouldy with age, was to be seen in a corner of the brew house—"this is a boat in which, after the execution, old Charon rows you over the Styx."

I was glad to see Mr. R. B. Fishenden, the London manager for Stephenson & Blake, walking about in restored vigour after his accident. A very little time before I had met him hobbling along in Fleet Street rather painfully, as it seemed to me, and certainly rather feebly, for he had had a mischance in jumping off a bus. He is really a nonsuch fellow with his keen interest in the craft, and his thorough grasp of the most modern methods, particularly photogravure, on which he had lectured so informingly at Stationers' Hall. Being a nonsuch man, I know you will say I did right in greeting him in his crippled state as "two sticks of nonpareil."

May I say a word of congratulation to Mr. Owen-Jones, the Editor of The Caxton, who month by month has done so much to keep alive and intensify that interest in the craft of which a successful exhibition is the notable, outward and visible sign. Frankly, I think it is one more evidence of pluck that this Exhibition has been so well supported. Printerdom is not a happy-go-lucky, but it is a happy-go-plucky fraternity. In 1921, when the Exhibition was held, the Triple Alliance was planning that strike which was to have brought pretty well all industry to a dead stop for a time. And the slump was just casting its shadow before. Not all exhibitors did very well during the Exhibition fortnight in 1921. Yet here they were again. That's the spirit. That's happy-go-plucky.

See these con curring heroes come; as we saw like con cur-rers in the recent fifteen hours' dispute. We can do thinks apart, no doubt, but we can do far greater things working together. The Exhibition has been a great Exhibition of this truth. Hearty congratulations to you, Mr. Editor, on your notable part in the accomplishment.

F. Colebrook.

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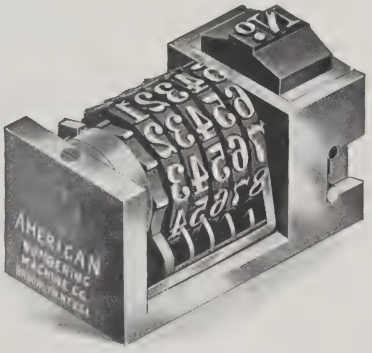

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THE SCOTTISH TYPOGRAPHICAL ASSOCIATION.

THE LONDON SOCIETY OF MACHINE RULERS.

THE SOCIETY OF WOMEN EMPLOYED IN THE BOOKBINDING AND PRINTING TRADES.

THE NATIONAL SOCIETY OF ELECTROTYPERS AND STEREOTYPERS.

QUEENSLAND MASTER PRINTERS' AND ALLIED TRADES' ASSOCIATION.

SOUTHERN TASMANIAN MASTER PRINTERS' ASSOCIATION.

DUTCH UNION OF MASTER BOOKBINDERS.

THE FINNISH MASTER PRINTERS' ASSOCIATION.

UNITED TYPOTHETÆ OF AMERICA.

SOUTH AFRICAN TYPOGRAPHICAL UNION.

FEDERATION OF THE EMPLOYERS' ORGANISATIONS IN THE BOOK PRINTING TRADE.

SOUTH AUSTRALIAN MASTER PRINTERS' AND ALLIED TRADES ASSOCIATION.

VICTORIAN MASTER PRINTERS' ASSOCIATION.

FEDERATION OF MASTER PRINTERS OF SOUTH AFRICA.

HON. ADVISORY TRADES COUNCIL.

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W. H. LOCK (Director, Linotype and Machinery, Ltd.), London.

Vice-Chairman :

W. I. BURCH (Director and Secretary, Lanston Monotype Corporation, Ltd.), London.

F. J. BOLD (Crabtree & Sons, Ltd.).

H. C. BOLTON (Lorilleux & Bolton, Ltd.).

CHAS. L. BURDICK (Aerograph Co., Ltd.), London.

RALPH CASLON (H. W. Caslon & Co., Ltd.).

C. A. CHARLTON (Cropper, Charlton & Co., Ltd.).

A. DARGAVEL (John Swain & Son, Ltd.,) London.

G. W. DAVIS (Linotype & Machinery, Ltd.), London.

T. C. EAMER (The Marshall Engraving Co.).

JOHN FRY (Fry's Metal Foundry), London.

R. B. FISHENDEN (Stephenson, Blake & Co., Ltd.).

W. GAMBLE (A. W. Penrose & Co., Ltd.), London.

A. E. GOODWIN (Secretary, The Federation of Master Printers).

DAVID GREIG (John Greig & Sons), Edinburgh.

ALBERT HESS (Hampson, Bettridge & Co., Ltd.).

T. HEWITT (Hewitt Bros.).

R. W. HORNE (Smythe-Horne, Ltd.), London.

E. S. HUNTER (Hunters, Ltd.), London.

FREDK. JOHNSON (Lindenmeyr & Sons), London.

JOSEPH MORTIMER (Secretary, Printers' Pension Corporation).

W. R. NICHOLSON (W. R. Nicholson, Ltd.) London.

PAXTON PETTY (The Autoknockups Co., Ltd.).

DAVID PAYNE (Cross Paper Feeder Co., Ltd.).

H. PAYNE (Dawson, Payne & Elliott, Ltd.).

WALTER PAYNE (Dawson, Payne & Lockett, Ltd.).

C. POLLARD (Geo. Mann & Co. Ltd.).

FRED J. RYMER (Sampson Lowe, Marston & Co., Ltd.).

A. DYKES SPICER (Spicers, Ltd.).

PERCY SQUIRE (Messrs. John Kidd & Co., Ltd.), London.

SIR ADOLPH TUCK, Bart. (Raphael Tuck & Sons, Ltd.), London.

F. WAITE (Waite & Saville, Ltd.).

E. W. H. WALKER (Walker Bros.), London.

H. WHETTON (Editor, British Printer).

H. WILLIAMS (H. Williams & Co.)

Organizers :	*General Manager :*	*Secretary :*
F. W. BRIDGES & SONS, LTD.	F. W. BRIDGES.	K. W. BRIDGES.

Exhibition Offices :

Avenue Chambers, 4, Vernon Place, Southampton Row LONDON, W.C.1.

Telegrams : Segdirb, Westcent, London. Telephones : Museum 6663-4.

First List of Exhibitors.

Adana Agency, 17, Church Street, Twickenham.

Aerograph Co., Ltd., 43, Holborn Viaduct, E.C.1.

Albion Sewing Cotton Co., Ltd., Fawley Mills, Tottenham Hale, N.17.

Algraphy, Ltd., Philip Road, Peckham, S.E.

Ashley Trading Co., Ltd., 11, Victoria Street, S.W.1.

"At-a-Glance" Calendar Co., Ltd., Finsbury Pavement House, E.C.2.

Ault & Wiborg London Co., The, Standen Road, Southfields, S.W.18.

Autoknockups Co., Ltd., Reading.

Baker Sales Co., 23, Farringdon Avenue, E.C.4.

Blackwell & Co., Ltd., 7, Dyers' Buildings, Holborn, E.C.

Blick Copier Mfg. Co., Ltd., Alliance Chambers, 1, Southwark Street, S.E.

Booth, Henry (Hull), Ltd., Park Avenue Printing Works, Hull.

Bowns & Co., 8-10, Granville Street, Sheffield.

British Drawing Ink & Adhesives Mfg. Co., 1-5, Upper Ground Street, S.E.1.

"British Printer," The, Thanet House, 231, Strand, W.C.

British United Shoe Machinery Co., Ltd., Union Works, Leicester.

Canadian-American Machinery, Ltd., Camco House, 63, Farringdon Street, E.C.4.

Canning, W., & Co., Ltd., 133-137, Great Hampton Street, Birmingham.

Capper Pass & Son, Ltd., Bedminster Smelting Works, Bedminster, Bristol.

Carmichael, Peter, & Co., Ltd., Carmic Works, 303, Southampton Street, Camberwell, S.E.5.

Cash & Clare, 75, Great Eastern Street, E.C.2.

Caslon, H. W., & Co., Ltd., 82-83, Chiswell Street, E.C.1.

City Litho Roller Co., 14, Wine Office Court, E.C.

Collier, A., Wilme, Ltd., 8th Avenue Works, Manor Park, E.12.

"Commercial Art," 37, Drury Lane, W.C.

Connoll, W. J., & Co., Ltd., printers' engineers, Leather Lane, E.C.

Connolly, Francis J., Ltd., 62, Park Street, Southwark, S.E.1.

Crabtree, R. W., & Sons, Ltd., 7, Farringdon Road, E.C.

Cropper, Charlton & Co., Ltd., Franklin Works, Wright Street, Nottingham.

Crosland, William, Ltd., Bredbury, Woodley, near Stockport.

Cross Paper Feeder Co., Ltd., 92, Fleet Street, E.C.4.

Dalziel Foundry, Ltd., 2a, Plough Court, Fetter Lane, E.C.

Davies, J., & Allen, 43, Basinghall Street, E.C.2.

Dawson, Payne & Elliott, Ltd., per Dawson, Payne & Lockett, Ltd.

Dawson, Payne & Lockett, Ltd., Dean Street, Fetter Lane, E.C.

Debecey Wholesale & Mfg. Co., Ltd., 14, Bow Lane, Cannon Street, E.C.4.

Deed, John S., & Sons, Ltd., 91, New Oxford Street, W.C.1.

Dennis & Webb, Ltd., 1-2, Little Boulogne Court, Little Britain, E.C.

Deritend Engineering Co., Ltd., Birmingham.

Dickinson, John, & Co., Ltd., Croxley Mills, Watford, Herts.

Dux Chemical Solutions Co., Ltd., St. Leonard's Works, Hancock Road, Bromley-by-Bow, E.3.

Dyer, Ltd., 8-11, King Street, Snow Hill, Holborn.

Electromotors, Ltd., Louisa Street, Openshaw, Manchester.

Evans, Edwin W., 150, Fleet Street, E.C.4.

Federation of Master Process Engravers, 268, Bank Chambers, 329, High Holborn, W.C.1.

Fosh & Cross, Ltd., 88, Mansell Street, E.1.

Fowler, A. Chris., 6, New Union Street, Moorfields, E.C.2.

Friedheim, Oscar, Ltd., 7, Watery Lane, E.C.4.

Fry, S., & Co., Ltd., 2, Aldermanbury Buildings, E.C.2.

Fry's Metal Foundry, 42, Holland Street, Blackfriars, S.E.1.

Furnival & Co., Ltd., Reddish Ironworks, Reddish, Stockport.

George, J. T., & Co., Howard Buildings, 13-15, Central Street, Old Street, E.C.1

Gibbons, Geo., & Co., 49, King Street, Leicester.

Gilby & Herrmann, Ltd., 7-8, Plum Tree Court, Farringdon Street, E.C.4.

Greig, John, & Sons, Fountain House Works, 28-30, Dundee Street, Edinburgh.

FIRST LIST OF EXHIBITORS—continued.

Grover & Co., Ltd., Britannia Works, Carpenter's Road, Stratford.

Gummed Paper Mfg. Co., Ltd., Victoria Mills, Narborough, near Leicester.

Hampson, Bettridge & Co., Ltd., 2-4, Fann Street, E.C.1.

Harbutt's Plasticine, Ltd., Bathampton, Bath.

Hare, C. H., & Son, Ltd., 93-94, Chancery Lane, W.C.2.

Harrild & Sons, Ltd., Fleet Works, Norwich Lane, Fetter Lane, E.

Hartmann Bros., Ltd., Copenhagen.

Hazell, Watson & Viney, Ltd., 52, Long Acre, W.C.2.

Heller & Sons, 96, Wardour Street, W.1.

Hewitt Bros., Field Street, King's Cross, W.C.1.

Hoe, R., & Co., Ltd., 109-112, Borough Road, S.E.1.

Holden, Arthur, & Sons, Ltd., 218-9, Bradford Street, Birmingham.

Horsell, Frank, & Co., Ltd., 33, Victoria Road, Leeds.

H.T.B., Ltd., Blackhorse Lane, Walthamstow, E.17.

Hunters, Ltd., 16-18, St. Bride Street, Ludgate Circus.

Intertype, Ltd., 15, Britannia Street, W.C.1.

Jenson & Nicholson (1924), Ltd., Goswell Works, Stratford, E.15.

Johnson & Sons, Manufacturing Chemists, Ltd., 23, Cross Street, Finsbury, E.C.2.

Johnson, Fredk., & Co., Ltd., 11b, Upper Thames Street, E.C.4.

Johnson, H. E. W., 12, Johnson's Court, Fleet Street, E.C.4.

Johnson, K., & Sons, Erskine Street, Leicester.

Johnstone & Cumbers, Ltd., 38, Farringdon Street, E.C.

Jones, C. R., & Son, 4, Stonecutter Street, E.C.4

Jones, Percy (Twinlock), Ltd., 22-23, Charles Street, Hatton Garden, E.C.

Jones, Samuel, & Co., Ltd., Bridewell Place, E.C.4.

Jones, William, & Co., 1-3, Silver Street, New Oxford Street, W.C.

Jubb, T. G. & J., Jack Lane, Hunslet, Leeds.

Kann, Tidswell & Co., Ltd., 4, Edmund Place, E.C.1.

Kidd, John, & Co., Ltd., 11, Wine Office Court, Fleet Street, E.C.

Kodak, Ltd., Kingsway, W.C.2.

Langley & Sons, Ltd., 6, Euston Buildings, N.W.1.

Lanston Monotype Corporation, Ltd., 43, Fetter Lane, E.C.4.

Lethaby, W., & Co., 130-2, Clerkenwell Road, E.C.1.

Light, Wm. J., & Co., Ltd., 30-33, Whitefriars Street, E.C.4.

Linotype & Machinery, Ltd., 9, Kingsway, W.C.2

Lloyd Memorial (Caxton) Seaside Home (Deal), 80, Blackfriars Road, S.E.1.

London Cleaning Cloth Co., Ltd., 30, Great Tower Street, E.C.3.

London Varnish & Enamel Co., Ltd., City Works, Carpenter's Road, Stratford, E.15.

Lorilleux & Bolton, Ltd., 34, Cursitor Street, Chancery Lane, E.C.

Ludgate Co., The, 76, Hanover Street, Edinburgh.

Lunnon, W., & Co., 59, Carter Lane, E.C.4.

Maas, W. A., Co., Ltd., The, 24, Highfield Hill, S.E.19.

Macey Co., Ltd., 65, Houndsditch, E.1.

Mann, George, & Co., Ltd., Henry Street, Gray's Inn Road, W.C.1.

Marchant Bros., Ltd., Verney Road, S.E.16.

Marion & Foulger, Ltd., Magna Works, London Road, Bedford.

Marshall, John T., 36, Powell Street, E.C.1.

Merry & Minton, Ltd., Westminster Works, Northfield, Birmingham.

Miehle Printing Press & Mfg. Co., Ltd., Blackfriars House, New Bridge Street, E.

Monometer Mfg. Co. (1918), Ltd., Savoy House, 115, Strand, W.C.2.

M24 Printing Machine Co., Rapid Works, Chorlton-cum-Hardy, Manchester.

National Loose-Leaf Co., Ltd., 27-29, Cursitor Street, Chancery Lane, E.C.

Nicholson, W. R., Ltd., 61-63, Scrutton Street, Finsbury, E.C.2.

Nicholson, W. T., & Clipper Co., Ltd., Clipper Works, King Street, Salford, Manchester.

Nickerson Bros., 99-101, Worship Street, E.C.2.

Nobel Industries, Ltd., Nobel House, Buckingham Gate, S.W.1.

Norman & Hill, Ltd., 54, Holborn Viaduct, E.C.1.

Notting, W., Ltd., Bowling Green Lane, E.C.1.

Nucard Co., Ltd., The, 57, Farringdon Street, E.C.

Oriental Leatherette Co., The, 14, Sun Street, Finsbury, E.C.2.

FIRST LIST OF EXHIBITORS—continued.

Parsons, Fletcher & Co., Ltd., Gravel Lane, Southwark, S.E.1.

Penrose, A. W., & Co., Ltd., 109, Farringdon Road, E.C.

Pictorial Machinery, Ltd., 7, Farringdon Road, E.C.1.

Pollard & Co., Ltd., 35, Cloth Fair, E.C.1.

Portals, Ltd., 92, Fleet Street, E.C.4.

Practical Machines Co. (A. T. Gadsby), Ltd., 46, Camberwell Green, S.E.5.

Printers' Medical Aid and Sanatoria Association, 30, Fleet Street, E.C.4.

Printing Trades Alliance, The, 8, Farringdon Avenue, E.C.4.

Ratcliff, John, & Sons, Ltd., Junction Foundry, Wortley, Leeds.

Regent Publishing Co., Ltd., The, 310, Euston Road, N.W.1.

Rembrandt Intaglio Printing Co., Ltd., 8, Bream's Buildings, Fetter Lane, E.C.4.

Ritchie, M. C., Ltd., 145, Farringdon Road, E.C.1.

Salicum, Ltd., 332b, Goswell Road, E.C.1.

Shaw, John, & Sons, Ruling Machine Works, Honley, Huddersfield.

Sheridan, T. W. & C. B., Co., Ltd., 63, Hatton Garden, E.C.1.

Shortt, C. W., & Co., Ltd., 8, Fulwood Place, W.C.

Shuck, Maclean & Co., Ltd., 3-7, Gunpowder Alley, Shoe Lane, E.C.

Simplex Machines Co., Ltd., Granville Works, Sheffield.

Skipper, Chas., & East, 49, Great Tower Street, E.C.3.

Slattery, Martin J. (Ludlow Elrod Co.), Savoy House, Strand, W.C.

Slingsby, H. C., 97, Kingsway, W.C.2.

Smith & Young, 4, Maiden Lane, E.C.4.

Smyth-Horne, Ltd., 1-3, Baldwin's Place, Gray's Inn Road, E.C.

Spalding & Hodge, Ltd., Russell Street, W.C.2.

Spencer & Cook, Ltd., 14-16, Bishop's Court, Old Bailey, E.C.

Stafford & Co., Ltd., Netherfield, near Nottingham.

Stanley, E. W., & Co., 23, Bartlett's Buildings, E.C.

Stark, H. H., Ltd., 193, Whitechapel Road, E.1.

Stoer Bros. & Coles, Ltd., 5, St. Andrew's Hill, E.C.4.

Stone, J. B., & Co., Ltd., 135, Finsbury Pavement, E.C.2.

Swedish General Electric, Ltd., 5, Chancery Lane, W.C.2.

Taylor, James, & Sons (Cleckheaton), Ltd., Woodroyd Mills, Cleckheaton, Yorks.

Tella Co., Ltd., Tella House, Devonshire Street, W.C.1.

Thomas & Bishop, Ltd., 37, Tabernacle Street, E.C.2.

Thompson, T. C., & Son, Ltd., Buxton Street, London Road, Manchester.

Timson, Bullock & Barber, Ltd., Royal London House, Finsbury Square, E.C.

Tollit & Harvey, Ltd., 40, Gresham Street, E.C.2.

Tomkin, G. F., 626, High Road, Leytonstone, E.11.

Ullmer, Fredk., Ltd., 29-31, Great Saffron Hill, E.C.1.

Universal Typecasting Co., Ltd., 56, Turnmill Street, E.C.1.

Usher-Walker, Ltd., Usher-Walker House, Great New Street, E.C.4.

Vickers, Ltd., Vickers House, Broadway, Westminster, S.W.

Victory-Kidder Printing Machine Co., Ltd., Victory Works, Birkenhead.

Vincent Brooks, Day & Son, Ltd., 48, Parker Street, W.C.2.

Williams Engineering Co., Ltd., Nodis Works, Julien Road, Ealing, W.5.

Winstone, B., & Sons, Ltd., 100-1, Shoe Lane, E.C.4.

Witton-James, Ltd., Hyde Electrical Works, Colindale Avenue, Hendon, N.W.9.

Woodroff, F. W., & Co., 77-78, Turnmill Street, E.C.1.

Wynne & Selby, Ltd., 21, Grosvenor Place, S.W.1.

Preliminary Notes on Exhibits.

Following are interesting details of some of the Exhibits. This list is by no mean complete. Many Exhibitors are not yet prepared to announce what they will show, and others evidently who make no announcement at present have surprises in store.

THE AEROGRAPH CO., LTD., 43, Holborn Viaduct, London, E.C.1.

Are exhibiting a variety of apparatus interesting to the printer. The smallest model called the " A " pattern is used in preparing pictures for process blocks: it is generally considered indispensable for this work. The next size, the " E " pattern, is extensively used for Christmas cards, window tickets, and generally where the printing is ornamented and beautified with colour shading. The " C " model Aerograph is used for litho work; it gives an open spray, and produces beautiful shaded effects on stone or zinc: special apparatus is designed to control the texture. The " Pistol " pattern is useful for doing posters direct, both for stencil lettering and colour shading; in small editions it is cheaper than litho printing. Finally, the Spray Painter can be used to paint or limewash the factory. The Aerograph Co., Ltd., are the inventors and pioneers in all of the applications of spraying to industrial purposes. Their manufactures are entirely British.

ALGRAPHY, LTD., Philip Road, Peckham, London, S.E.15.

This old-established firm, the pioneers of the first perfect lithographic plates, are showing specially rolled and selected sheets of aluminium and zinc for offset and all litho purposes, together with " Alco " rubber blankets which have been adopted by all the leading offset press manufacturers. Specimens of sundries used in connection with the graining of plates will be on view, together with other interesting matter showing the great advance during the last five years in all accessories necessary for the production of the highest class of printing, and showing how necessary it is that the care and preparation of the plates and the graining of same should be the first consideration of all lithographic printers.

THE ALBION SEWING COTTON CO., LTD., Tottenham Hale, N.17.

A wide range of colours and sizes in the well-known Albion " Silky Cords," the mercerised cords of a hundred uses, are being shown. These cords, stocked in over 100 colours, are used for calendars, carrier bags, boxes, etc. Tassels are also well to the fore, and should be of special interest in connection with Christmas and greeting cards, fancy calendars, booklets, etc. Book-sewing and Stitching Threads are a specially strong line with this company, and particular attention will be directed to the display of the "Amir" threads, a recent production which is meeting with a huge demand. A number of other lines, such as Twines, Tapes, Rubber String Bands, Carding Elastic, etc., will also be shown.

THE ASHLEY TRADING CO., LTD., 11, Victoria Street, London.

The " Rex " Cold-water Flour Paste, which is made from maize flour specially treated in the crushing by a secret process in order to bring out its full dextrine properties, is being shown. This flour is of pure white colour, and will keep for any length of time in its dry state without deteriorating. We understand it contains no harmful preservative, and is guaranteed not to stain the most delicate papers. The paste is easily and quickly mixed by pouring it into cold water.

This company are also exhibiting their " Rex " Cold-water Glue, which is a vegetable glue in powder form, specially made for the printing, stationery and bookbinding industries, in cases where a quick-drying adhesive is required. The principal advantages claimed for this glue are that it is odourless, and no cooking is required.

THE " AT-A-GLANCE " CALENDAR CO., LTD., Finsbury Pavement House, London, E.C.2.

Are patentees and manufacturers of the well-known " At-a-Glance " Calendars. The feature of these calendars distinguishing them from all other calendars is a date-indicator attachment. This consists of an adjustable transparent band fitted across the date sheet, on which is carried a small red frame moveable so as to surround the date from day to day. By this means a glance is sufficient to show without hesitation the date, while the rest of the month is in full view in bold figures. Owing to the wide popularity of " At-a-Glance " calendars, the advantages of using them for advertising purposes are apparent, and the company now do a very large business in supplying their calendars to business firms with publicity matter displayed round the date portion. A unique range of specimens of this series is being displayed, and should serve to give a very good idea of what may be accomplished in this most useful form of advertising.

THE AULT & WIBORG LONDON CO., Standen Road, Southfields, London, S.W.18.

Are exhibiting their Gritless News and Illustration Inks, well-known throughout the world. They are also exhibiting their famous Lithographic and Letterpress Inks for every printing process, and also a complete range of their dry colours. A special feature is the exhibition of their patented " Ideal " rollers for lithographic and letterpress machines. In addition they are showing a number of examples of printed matter produced by all the latest processes with the aid of their inks and rollers, the work of some of the foremost printing houses in Great Britain and the United States.

BAKER SALES Co., 23, Farringdon Avenue, London, E.C.4.

Composing-room equipment made entirely of all steel, covering many designs, and including space- and labour-saving features. The display will include designs especially suited for newspaper work, and other designs arranged for publication and general commercial printing. In addition to being all steel, other chief features are the item of concentration and system for handling the work, which are included in each and every piece. In addition to steel equipment, this company is showing Vandercook Proof Presses; Superior Point System Saws and Trimmers, and other labour-saving devices which go to improve the composing room.

J. BANCROFT & SONS CO., Rockford, Wilmington, Del., manufacturers of linen-finish book cloths, buckrams, tag cloths, etc.

Are exhibiting their various exclusive lines of Book Cloths. The decoration of their stand with the many art shades in which these cloths are obtainable never fails to attract attention, and users of book cloths would do well to make a special point of visiting this exhibit in the Gallery. The famous Legal Buckram, of which this firm are the manufacturers, will be shown. Legal Buckram is prepared under very strict specifications. It is guaranteed free from any material attractive to insects, free from aniline dye, and absolutely sunfast, which makes it specially suitable for colonial and tropical countries. It is largely used for library, law and loose-leaf bindings; in fact, for all bindings that are required for constant reference over long periods. Messrs. Nickerson Brothers, 99 and 101, Worship Street, London, E.C.2, are the sole selling agents in Great Britain and Ireland for the J. Bancroft & Sons Co.

THE BLICK COPIER MANUFACTURING CO., LTD., Alliance Chambers, 1, Southwark Street, S.E.1.

Are well known as manufacturers of Duplicating Devices, Hectograph, Endorsing, Metal Stamp and other Inks, and the " Fearnought " Endorsing Pad, which can be supplied under customers' own name and address. They are the sole agents for the well-known " Boston " Pencil Pointer, and also for the "Climax" Numbering and Dating Machines, and in all these do an increasingly large business. The Blick Co. also specialise in Ribbons and Carbons. Their " Dreadnought " Carbons and " Fearnought " Ribbons are of the very best quality and well known. Ink Eradicator, Stencil Developer, and General Typewriter Accessories are given special attention.

HENRY BOOTH (HULL), LTD., Park Avenue Printing Works, Hull.

Are again showing their well-known " Nautch " series of easy-tearing Roll Tickets. Millions of these are being sold by the trade every year, and the demand is ever on the increase. Amongst their other numerous lines are specialities for the cinema and theatre trade, such as booking tickets, reserved seat cards and numbers, pass-out checks, poster slips, etc.; gummed lot numbers in rolls, cattle numbers, pen numbers, waiters' check pads, bottle deposit labels, and bottle seals in rolls. Other well-known lines are cloakroom tickets in pads and rolls, gummed imprint tickets, watch stopping tickets in book and card form; also specialities for use in the sports season which include competitors' numbers, coat badges, prize tickets, etc. A special display is being made for the first time of the " Nautch " series of Washered Tags, and this should prove a very popular line with the trade. These are made in the usual range of sizes and in various qualities to suit every general purpose. These people are also making a special line of gummed labels in roll form.

THE BRITISH PRINTER, Thanet House, 231-232, Strand, London, W.C.2.

A journal for printers. Now in its 37th year. Published alternate months. The British Printers' National Journal. Copies of current issue on view for examination. Also copies of The British Printer Press publications in the shape of trade books and foreign trade journals. The technical handbooks cover all branches of the allied trades.

VINCENT BROOKS, DAY & SON, LTD., 48, Parker Street, Kingsway, London, W.C.

Current work of the firm in Chromo-lithography by offset or otherwise is being shown; also examples based on various applications of photography; historic exhibition of the work of the firm since 1823; examples of Auto-lithographs by artists of eminence and applied either to art or commercial use.

CAPPER PASS & SON, LTD., Bedminster Smelting Works, Bristol.

A very old and well-known firm of smelters and refiners of nonferrous metals and alloys. All grades of their various standard printing metals are being shown, including Founders' Type Metal, Mono, Stereo, Lino, Intertype, and Typograph Metals. Their Founders' Type Metal No. 1025 is strongly recommended for use with the Lanston Mono display-type casting machine, for 14-point and upwards. On account of the exceptionally fine type produced both in solidity and perfection of face, 36-point slugs cast with this metal are stated to be heavier than similar-sized founders' type. Their Mono metals are made in three standard grades, Nos. 1016, 817 and 616, to meet varying requirements. For general jobbing work and runs up to 100,000, Pass No. 616 is recommended; over 100,000, Pass No. 817, a somewhat harder metal containing more tin is manufactured; and for very special work, Pass No. 1016 metal, containing still more tin, is recommended. Their stereo metals comprise mixtures suitable for all purposes, and different grades of Lino, Intertype, and Typograph metals will also be included. Another interesting exhibit of this firm is " Chempur " tin, which they claim to be the purest tin in the world, containing as it does 99.9889 per cent. tin. Various other alloys of interest to the printing trade include soft lead and antimonial lead.

W. CANNING & CO., LTD., 133-137, Great Hampton Street, Birmingham.

This firm will have a technical display of great interest in the full equipment for electro-depositing devoted to the exclusive interest of the printing trade. Of particular interest is a Depositing Vat complete with revolving gear, agitator and automatic burnishing device for the production of electro-deposited copper cylinders for rotary work. In addition an improved Electrotyping Vat for the production of flat electros is being shown, complete with agitator and a special section supporting frame fitted with an arrangement with clip ends.

A comprehensive range of Low-voltage Dynamos and Motor Generators, with a capacity from 30 to 3,000 amperes represents the latest design for dynamos of this type, and are quite a testimony to the high standard of British engineering. A special type of Brush collecting gear is a new feature, and the accessibility of all parts needing attention or adjustment is quite a feature.

Another interesting exhibit is a complete working model of a Nickel Facing Plant, showing how a stereo is nickel-faced by modern methods. Th working exhibit should prove very instructive to many visitors who have not yet fully realised how much money is to be saved and how much better work can be turned out by the adoption of nickel-facing, and the carrying out of the work being of a more simple character than many are led to believe.

Another interesting process is the production of nickel-steel electros by the " Niferro " Nickel Steel Solution. The deposit being so much harder than copper, a much greater number of runs and clearer impressions can be obtained. With a 30-minutes deposit of " Niferro " nickel steel an electro is produced which will give twice the number of impressions obtainable from a copper electro.

PETER CARMICHAEL & CO., LTD., engineers and envelope machine makers, 303, Southampton Street, Camberwell, London, S.E.5.

Are exhibiting several of their machines, many of which types are in use in envelope works in this country and abroad, and which must be of great interest to all envelope manufacturers. Amongst their exhibits will be found: The Carmic Adjustable Envelope Folding Machine, upon which can be folded any size envelope or official bag, as the case may be, between a very extensive range to suit the requirements of thir customer. The machine exhibited has a range from $5\frac{3}{4}$ in. by $3\frac{1}{2}$ in. up to 13 in. by 7 in. Its output is 4,000 per hour. The Carmic Victory Folding Machine, which they claim to run at 6,000 per hour, produces envelopes of any set size with gummed flaps. The Carmic (one side adjustable) Folding Machine turns out perfect bags or envelopes at a speed of 5,000 per hour, and is particularly suitable for official bags. The Carm Power Shape or Straight-across Flap Gumming Machine fills a long-felt want in the envelope-making industry. It gums the flaps of envelopes, wallets, official bags, or seed bags, either shaped or straight across the flaps, and has a very extensive range of sizes. Its production is 6,000-7,000 per hour of well-gummed blanks. The firm have only had this machine upon the market about twelve months, and so far the demand has fully justified the enterprise of producing such a machine for special gumming.

H. W. CASLON & CO., LTD., 81/2, Chiswell Street, E.C.1.

Following their participation in the previous exhibitions, this firm is making an extensive exhibit. In addition to the latest and most up-to-date designs in Printers' Joinery, Composing Frames, Randoms, etc., also Type and Woodletter, in new and original designs, there will be an important show of machinery in actual operation. Having regard to the necessity of increased earning powers to offset high costs, several new devices are being shown, to effect saving in machine-time, increased earning capacity, efficiency, etc., which should be of general interest to the trade.

THE CITY LITHO ROLLER CO., 14, Wine Office Court, Fleet Street, London, E.C.4.

A quantity of Lithographic Roller Skins and Hand Rollers of various sizes taken direct from stock are being shown, also several complete hides from which the skins are cut. Mr. Baxter or Mr. Thornton will be in attendance throughout the exhibition, and will have pleasure in passing on any information that may help their friends, old and new, in the preparing and upkeep of lithographic rollers that they have experienced through over thirty years as actual makers.

CONNOLL & COLES, LTD. (incorporating W. J. Connoll & Co.), 69, Leather Lane, Holborn, E.C.1 (and at Clerkenwell).

The outstanding exhibit is the " Vercyl " Vertical Cylinder High-speed Job Printing Press, which is being manufactured in Great Britain by a first-class engineering concern. The " Vercyl " is the outcome of the firm's introduction of the " Unica " press, which was reviewed in THE CAXTON MAGAZINE and other trade papers some time ago. Connoll's sold some twenty or so of these machines with moderately successful results, but over two years' experimental work in improving the imported machine proved beyond all doubt that further alterations and improvements were desirable, also that British engineers can successfully compete with the German both for quality and price, and that a perfect press of this type is a necessity to the trade. The " Vercyl " incorporates the best features of the existing machines, whilst eliminating those less desirable, as, for instance, entirely dispensing with springs. This machine is made to take a full-size crown-folio job instead of foolscap-folio, with improved cylindrical instead of disc inking, a thoroughly efficient cylinder check which is operated in any position, and numerous other details. The make-ready is extremely " get-at-able," the method of feeding the sheets into independent grippers simple, easy, and speedy, and the register is perfect, the cylinder giving a knife-edge impression. All adjustments are made from the front of the press, vibration and noise is practically nil, and, owing to the design of the machine, it will turn out larger jobs than it is possible on any other of same size, the output being equal to two platens, besides a higher grade of work. A special feature is that delivery is automatic, print side up in full view of operator in front of the machine, the printed side being untouched during delivery, and also that perfect register is maintained at a speed of 2,400 per hour actual output. From an engineering point of view the construction is thoroughly sound, and, whilst there is not an atom of waste weight anywhere, every part has an ample reserve of strength, and the result is a very compact, smooth-running, highly efficient machine of handsome and pleasing appearance. It has a capacity of anything from a visiting card to a sheet about 16 in. by 12 in., will handle thick, thin, gummed paper and pulp boards, and occupies very little space, and only requires $\frac{3}{4}$-h.p. to drive. No hand guard is necessary, the machine being absolutely " fool-proof," easily operated, and is " manned " by the Platen Society under their trade union. The price is sufficiently low to warrant it being described as revolutionary. The press will be exhibited in full operation.

FRANCIS J. CONNOLLY, LTD., Union Works, 62, Park Street, Southwark, London, S.E.1.

Are fully occupying the whole of the space which they have taken to present fourteen or fifteen exhibits. Offset machines of various types are their main feature.

A. WILME COLLIER, LTD., 8th Avenue Works, Manor Park, London, E.12.

Are showing their well-known office paste, " Gloy." " Dex " White Paste in " well " jars, complete with brush, for office, library and photographic use, is an addition since the last exhibition, although the smaller pots and tubes for photographic purposes were exhibited upon that occasion. " Kirkor " Liquid Glue is packed in orange and black tubes, and is a very strong adhesive for repairing ornaments, furniture, and practically all household articles. It is now quite well known throughout the trade. In addition, various other adhesives for re-sale by stationers and for use by printers, bookbinders, etc., are being exhibited.

R. W. CRABTREE & SONS, LTD., of 7, Farringdon Road, London, E.C.1, and of Water Lane, Leeds.

A large range of printing machinery on two of the stands is being shown. It is not, of course, possible, to show a newspaper printing press of the large type which they normally manufacture under working conditions for a short-period exhibition, but they will show detail parts of these presses for explanation to visitors. Messrs. Crabtree claim that by the conjunction of these parts in their presses they have extreme speed coupled with extreme ease of handling, and perfect safety for the running staff, developed to the highest degree possible. Examples will be shown of the various cylinders in use in their presses, and probably their specialised folding mechanism. In addition to the above, their new " Ensign " Super-Offset Two-colour Machines of large size, specially fitted with high-speed automatic feeders, and single-colour machines, including the " Little Ensign," which prints 20 in. by 12 in., is to be shown fed by hand up to 4,000 per hour. In addition to the above, they will either show a new tin printing rotary or some of their latest accessories, such as Proofing Presses or transferring presses. There is very little doubt that, in view of the novelty of their manufactures, this will be one of the most informative exhibits.

WILLIAM CROSLAND, LTD., Bredbury.

One 42 in. " Advance " Self-clamp Guillotine, latest model and design, which embodies new features, attention being particularly drawn to the flywheel being fitted with ball bearings, saving both in power and attention. This firm also offer this same guillotine fitted with fully automatic feeding attachment, very suitable for ticket and cheque book work, cigarette card cutting, and similar repeat work. The adjustment is robust in construction, and places on the market a feeding arrangement at a price comparing more than favourably with that of foreign machines.

One New Model Cutting and Creasing Machine, 22 in. by 30 in. inside of chase, complete for folding box work. This is a well-known machine, and will also be shown fitted with a heater plate for embossing.

One Corner and Slot Cutting Machine, one side fitted with 6 in. corner and one side 6 in. slot.

One No. 12 " Boston " Wire Stitching Machine. This model has a 12 in. arm with an easily adjusted attachment to make the stitch either in direction cross or alternatively parallel with the arm of the machine as operations demand.

One No. 15 " Boston " Wire Stitching Machine, a heavier and more substantial machine than the former and one very suitable for heavy container work; special stands and attachments can be made to suit practically any class of container.

One latest Improved Bending Machine with adjustable strip. This machine will bend the heaviest to the lightest boards without cracking; it is of strong and substantial design, made in several sizes to 75 in. wide.

DALZIEL FOUNDRY, LTD., 2a, Plough Court, Fetter Lane, E.C.4; 19/25, Earl Street, Finsbury, E.C.2; 5/7, Marsh Street, Ancoats, Manchester.

Specimens of all classes of Line, Halftone and Colour Work produced in their process engraving department.

Dalziel Stereos from all kinds of letterpress formes, for flat and rotary printing, made in their foundries.

Parker Boards for mounting original plates, Dalziel stereos or ordinary electros and stereos. All sizes in stock, from foolscap folio to quad-royal.

The Dalziel Register Finder System, by which sets of original colour plates or Dalziel stereos taken from them are laid down in good register on Parker Boards, will be demonstrated and the many advantages of this process explained.

J. DAVIES & ALLEN, 43, Basinghall Street, London, E.C.2.

" Glossolar " Gold and Silver Enamel: high-grade gold paint, put up in boxes, liquid and powder separate. " Glossolar " Gold and Silver Letterpress Printing Ink: a combination of liquid and powder, which, when mixed together, produces a very satisfactory letterpress printing ink; made in three shades of gold, and also silver. A large variety of Children's Paint Boxes for retailing from 6d. to 30s. per box; the goods shown will be found in such variety that all classes of trade can be supplied. Water and Oil Colour Tubes in counter cases. Painting and Story Books for artists' material trade. Lustrous Metallic Stencil Outfits: a combination of lustrous metal powders for use on stencils; each box contains a variety of coloured powders, a bottle of liquid, stencil brush and stencil. " Staneglas ' Window Transparencies: an efficient decoration for windows, put up in rolls, each roll in a cardboard roller; " Staneglas " window transparencies are stocked in about 150 different patterns. Showcard and Poster Colours in bottles. Carded Brushes for retail shop trade, in great variety. Glue and Paste Brushes for printers, bookbinders, and other trades. " Nero " Untarnishable Aluminium Paint for painting machinery, water pipes, radiators, etc. Children's Pencil Boxes, Pencil Wallets, and other novelties.

DAWSON, PAYNE & LOCKETT LTD., 103, Farringdon Road, London, E.C.1.

This exhibit shows a " Leader " Envelope Folding and Gumming Machine by David Carlaw & Sons, Glasgow. It is of new design, and embodies many improvements, not the least of which is increased output.

Some Waite & Sheard Ruling Machines, including the following: Two-cylinder Two-colour Disc Ruling Machine for " run through " and automatic striker work, with automatic pile feeder; Striker Ruling Ma-

chine, which embodies latest improvements and refinements. Also a selection of the manufactures of Waite & Saville, Ltd., Otley, including Falcon Safety Platens, automatic and semi-automatic, speed up to 4,500 an hour. Automatic Falcons will deal with all classes of stock, and can be changed for different sizes and weights in a few moments; semi-automatic Falcons have a safe and easy feed, and the output is double that of an ordinary platen. Die Stamping Presses: the new " Inverted " Waite Die Press will be a fresh feature in the Printing Trades Exhibition. Briefly, it produces work of the same quality and output as the Standard Model Waite Die Presses, but with a huge saving in ink and wiper paper, and in addition it prints face side up. Offset Presses: the successful Waite Rotary Offset, fully automatic and for hand feed, and a new Two-colour Rotary Offset having very distinctive features.

THE DEBECEY WHOLESALE AND MANUFACTURING CO., LTD., 14, Bow Lane, London, E.C.; 30, Princess Street, Manchester; Oldbury, Worcestershire.

This house, which claims to be the largest in the world manufacturing drapers' and grocers' books, café pads and restaurant pads, etc., solely through the trade, are making a special feature of these and other of their productions, such as invoice forms in reel form for billing machines, patent statement forms and duplicate postcard strips, receipt forms ready gummed and perforated for over-printing and making up. Also a great variety of duplicate and triplicate work in skeleton form which the " busy " printer should find of great assistance. This company is also known for an excellent range of stock duplicate and triplicate lines. The Flex-back series of pen duplicate order book, that are neither sewn nor stabbed and open perfectly flat, will be of great interest to the commercial stationer. A display of calendar tear-offs, daily, weekly and monthly, with a variety of advertising calendars supplied to the trade complete with their customers' advertisements and other specially printed lines designed to enable the printer to cater for the local trade by making use of specialists' equipment, are embodied in the Debecey exhibit.

DENNIS & WEBB, LTD., Little Montague Court, London, E.C.1.

Are making a very representative display of their well-known Embossing Presses. These cover a large range of patterns, and every improvement that skilled labour and modern up-to-date plant can produce is shown in these presses, which range from the smallest address press to the largest corporate seal. In addition, large varieties of Rubber Stamps, including the new " Lyte Wayte " (Light Weight) stamps, which are now being largely used all over the country, and are being exhibited in public for the first time at this exhibition. The " Royal " Self-inking Stamp Pads, well known for many years, are now being shown in the new tins, which, being the same colour as the pad inside, are a distinct improvement, and inks for these pads in all sizes from ¼ oz. upwards make a very good line. Specially interesting will be a large variety of Sign and Ticket Printers' and Solid Rubber Type Outfits; this class of work has been largely the monopoly of foreign manufacturers, and the exhibit on this stand shows that the English-made articles are quite up to the standard of the foreign goods, and should help to keep a large portion of this trade in the home market.

JOHN DICKINSON & CO., paper makers, Croxley Mills, Watford, Herts.

High-class papers made at Croxley Mills, consisting of the better grades of paper, such as T.S. Writing, Banks, Bonds, Cover Papers, and all leading papers in stock for publishing work. Home Park Mills will show their productions of high-grade Coated Papers and Boards, which are well known to the printing world. Nash Mills are also showing some of their productions of White and Tinted Pulp Boards, which are particularly known for their folding qualities and rigidity.

THE DUX CHEMICAL SOLUTIONS CO., LTD., St. Leonard's Works, Hancock Road, Bromley-by-Bow, London, E.3.

" Duxeen " has been on the market for over four years, and during this period it has permanently established itself as a valuable bookbinding and covering material, especially in hot countries where the high humidity and insect pests play havoc with ordinary book covers. A very large variety of articles—books, albums, boxes—bound in Duxeen, of every variety of colour and design, will be shown; but of chief interest will be the demonstrations showing the properties of the material. An artificial landscape, comprising a lake, with islands, waterplants artistically arranged, and with goldfish moving about, may be seen, and all supported on a foundation base of Duxeen. Book covers, labels, etc, immersed in water, will be found on the stand, and a complete waterproof book will be on exhibit and offered to any visitor who cares to test for himself such a unique production. It is scarcely necessary to draw the inference that a book bound in material that is waterproof, that will not stain when water comes in contact with it, and will stand sponging or even washing, has a value, especially for school books and articles that must come into contact with rain or damp, that can be scarcely estimated.

Perhaps the most striking exhibit will be found to be a book cover that has been exposed to white ants for ten weeks. The board has been entirely eaten, but the Duxeen remains practically untouched. Such an exhibit will convince the most sceptical of the insect-resisting properties of this wonderful material, and for this reason will convince him also that Duxeen must be of inestimable value in countries where " moths corrupt " and where cockroaches spoil the bindings of all books exposed to their ravages, even for a single night.

DYER, LTD., 8-11, King Street, Snow Hill, London, E.C.1.

Embossing, Stamping, and Gold Blocking Dies of every description; Brass Type for cutter crush showcards; also fine embossed examples produced from dies engraved by this firm, such as catalogue covers, showcards, box-top labels, Christmas cards, perfumery labels, high relief embossed showcards, cutter crush, and cameo embossing.

Mr. EDWIN W. EVANS, the well-known printers' auctioneer and valuer, newspaper valuer and assessor, 150, Fleet Street, London, E.C.

Is exhibiting various detailed specimen inventories of letterpress and lithographic printing, bookbinding, boxmaking and engraving plants, which show how thoroughly the work is accomplished, being detailed and individually priced even to the smallest article, a unique exhibit of great interest to the trade. One of Mr. Evans's representatives will be available at all times at his stand, and will gladly furnish advice upon fire insurance and valuatory matters.

FARYNDON FOUNDRY, Universal Building, 56, Cowcross Street, London, E.C.1.

Are exhibiting two Typecasting Machines at work re-casting customers' old and battered type into new and up-to-date faces. They will also be laying type straight from the machines into case, demonstrating how a printer can send his barged cases and have them returned the same day levelled up, saving his picking for sorts, and enabling him to purchase only what he wants. It will also be demonstrated how floor sweepings, broken metal furniture, etc., can be converted into good quads and spaces; furniture and leads at very small charge.

THE FEDERATION OF MASTER PROCESS ENGRAVERS, Room 268, Bank Chambers, 329, High Holborn, London, W.C.1.

The Federation of Master Process Engravers, in its desire to call attention to the importance of illustration in all kinds of publicity, strikes a new note, inasmuch as the individual stands in various parts of the building are being abandoned and attention concentrated upon one comprehensive scheme of grouping all their exhibits in one hall, called the Photo-Engravers' Exhibit. For this purpose they have taken the North Gallery Annexe, specially arranged and decorated, with a view of drawing attention to the work of the Federation in general, and to the facilities offered by its various members in all classes of process engraving.

Beautiful specimens of all classes of process engravings will be shown in both black and white and in three and four colours. Examples of fine catalogue work suitable for all kinds of manufactures, magazine and newspaper illustrations in both halftone and line, together with all that is best in modern advertising art in which illustration plays such a prominent part. Examples of commercial photography, exquisite airbrush retouching, designing for commercial and decorative purposes; in fact, illustrations of all kinds and for all uses.

The houses that specialise in photogravure are showing some of their best work in this class of reproduction which is finding such a welcome with various sections of the public; many of these exhibits will be well worth a careful study.

Although the exhibit is a co-operative one arranged by the Federation, each firm will have its own particular stand or screen, and representatives will be in attendance for the purpose of explaining details to buyers and prospective users.

The engraving houses participating have formed a committee amongst themselves in order to make the best use of the Hall as a combined show, so that every member will doubtless reap more publicity than he could obtain in any isolated position, and the Engravers' Hall will be one of the most prominent and interesting features of the 1925 Exhibition.

This co-operative effort on the part of the Engravers' Federation is bound to have its effect upon the trade and public, and emphasise the possibilities of process engraving, as well as the advantages to manufacturers and others which may be derived from more extended use of pictorial publicity.

FOSH & CROSS, LTD., lithographic and letterpress printers to the trade, offset specialists, 88, 90, 92, Mansell Street, Aldgate, London, E.1.

This firm has not yet decided what type of specimen to exhibit, but it is certain they will be showing Offset-Litho Prints, including several by their photo-process.

MR. A. CHRIS. FOWLER, printer, stationer and account book maker, specialist in three-colour printing, advertising novelties, high-class catalogues, 6, New Union Street, and Tenter Street, Moorfields, E.C.

Mr. A. Chris. Fowler, who was awarded Gold Medals at the last five International Exhibitions for three- and four-colour printing, is again exhibiting framed specimens of this class of work, on coated and uncoated papers, picked at random from work executed in the ordinary course of business, showing the high quality of work and attention to detail maintained by the firm.

OSCAR FRIEDHEIM & CO., LTD., of 25, Water Lane, Ludgate, London, E.C.4.

Exhibiting, amongst various other machines for bookbinders, their latest machinery for book-sewing and thread-stitching. These new models embody all the latest and most up-to-date improvements, and the machines will be shown in actual operation on the stand, and demonstrations of the working of same will be given to visitors. These machines will be:—

" Martini " Thread-stitching and Knotting Machine capable of doing every variety of sewing, over tape and through tape of various widths, also plain (French) sewing. This machine is of new construction—without stitching heads. The old principle of needle heads having been entirely eliminated enables the stitches to be brought much closer together than hitherto, and many more stitches can be sewn into a book, thereby giving greater strength.

" Martini " Thread-stitching and Knitting Machine No. A 505: specially designed for stitching with thread all classes of work hitherto stitched by wire—exercise books, note and memorandum books, pamphlets, and all sectional work of a similar character. The machine is capable of stitching from a single sheet up to ¼ in. thickness without adjustment, and produces 2 in. and 3 in. single stitches, also 3 in., 4 in., and 5 in. three-hole double stitch, and in addition a corner hanging loop. The machine is supplied with a saddle for book work and a flat table for block work, showcard looping or stringing, and it is capable of working with mercerised silk thread, cord, down to thin cotton. It is manufactured in two models.

FRY'S METAL FOUNDRY, 25-42, Holland Street, Blackfriars, London, S.E.1.

" Fryotype " Printing Metals for all purposes, and their constituent metals. Exhibits illustrating the " Fryotype " service to the printing trade for counteracting the depreciation of printing metals.

Modern melting equipment specially adapted for printing works.

Exhibits illustrating temperature control by means of Pyrometers, etc., with temperature indicators and recorders, from the simplest form to the most elaborate installations.

A special feature of this stand will be demonstrations of an equipment for minimising the danger of lead poisoning by handling dross without it polluting the atmosphere.

S. FRY & CO., LTD., 2, Aldermanbury Buildings, London, E.C.2.

Are showing an extensive range of Bronze Powders embodying the latest improvements. Formerly it was only possible to secure finely-ground powders at the expense of brilliancy, but Messrs. S. Fry & Co., Ltd., are now showing a comprehensive range of finely-

ground powders which are at the same time of extreme brilliancy. The firm also claim for their powders that no dross or waste remains when put through the bronzing machine, which is a highly important consideration to users.

J. T. GEORGE & CO., printers' engineers, Central Street, Old Street, London, E.C.1.

The following are particulars of the exhibit of this firm :—

" Eclipse " Safety Guards for platen machines, in operation, fitted to two kinds of platen machines.

The " Diamond " Press.

Lever Guillotine Cutting Machine.

" Universal " and other Punching and Eyeletting Machines.

" Eclipse " and " Little Giant " Lead and Rule Cutters.

Labour-saving Founts of Brass Rule.

Printers' sundries.

The " Eclipse " Guard can be raised at any position of the platen, and does not interfere with the operator in feeding or taking off.

The Hand-lever Guillotine Cutting Machine is fitted with side-lay; the back table is marked by inches; the knife can be adjusted and wear taken up by screws on the top of the frame.

GILBY & HERMANN, LTD., 7 & 8, Plumtree Court, Farringdon Street, London, E.C.4.

This firm specialises in high-class Offset Inks and Inks of " Quality " for all printing processes. They are exhibiting the various classes of Letterpress and Litho. Inks, amongst them their new series of " Hercules " Offset Inks, which are well worth the attention of the offset printer. Being the sole agents in this country for Wm. Korn, New York, there will be a good show of his products, including Wm. Korn's chalks in all grades, crayon pencils, writing ink, and Wm. Korn's liquid litho ink, which litho printers have found such a boon for filling in solids on plate or stone, and also for air brush purposes. There will also be a good display of letterpress, and especially litho. and offset printers' sundries.

JOHN GREIG & SONS, Printers' Engineers, Fountain House Works, Dundee Street, Edinburgh,

Are showing a " New Conqueror " Self-Clamp Guillotine and " New Style " Rotary Perforating Machine, both 1925 models; also other two of their well-known makes which have not as yet been decided upon.

These 1925 models are a great advance on anything hitherto achieved by Messrs. Greig, and go to prove that now, as always, this firm is by no means content to rest on its laurels, but is always on the move in its endeavours to still further augment the utility and productivity of its machines. For example, while the simplicity and substantiability of the "New Conqueror " are still further exemplified in the 1925 model, there are numerous improvements in many directions, each of which has been carefully studied with the help of a variety of users of these cutting machines, and has been subjected to strenuous trial at Fountain House Works before being embodied by Messrs. Greig as a standard fitment.

The modern method of perforating will be shown on their new Rotary Machine, which has now larger diameter dies. This increased diameter makes the perforating action of the machine much easier, giving a clean cut on bottom sheet, and will allow the dies to run much longer before renewals or repairs are necessary. The perforating speed will be about 60 feet per minute, which will double the speed of the smaller dies, while the output, of course, will be increased. This machine can do round hole, slot hole, and " invisible " perforating, while slitting and creasing can also be carried out if so desired. In other words, this Rotary Perforating Machine can do the work of five ordinary machines, and is therefore a real money saver.

GROVER & COMPANY, LTD, Brittania Works, Carpenter's Road, Stratford, London, E.18,

Are exhibiting three or four types of the well-known Grover Perforators, suitable for work of a general nature as well as for the postage and advertising stamps. Type I., as recently supplied to the new British Stamp Contractors and to several British Colonies and countries abroad, is shown with new features, including a simplified pinning table, and also special arrangements of punch boxes with each " spur " of the comb adjustable independently for " wet " work. A Type IV., straight line machine, is shown with five 6 in. " disappearing " sections, any or all of which may be made to disappear either independently or coupled by a simple lever movement. It is claimed that by this method cheque book work may be more easily done, and with greater and quicker adjustments than with the usual type of cheque book perforator; and without interfering with its constant and usual work of straight line perforating. Type VI. (a lighter form of gripper machine than Type I.) will be shown with a special form of stepping gear, by the aid of which regular perforating can be made, with an irregular " beat " when required to provide for a guillotining or binding margin. With this machine will also be shown perforating features of interest to the electrical trades. It is confidently expected that the whole exhibit will be of great interest to the printing trades, opening up as it will many perforating possibilities hitherto considered impracticable.

GUMMED PAPER MANUFACTURING COMPANY, LTD., Victoria Mills, Narborough, near Leicester.

Are showing their British-made " Tiger-Tiger " Glued Stay Papers, Sealing Paper, Linen and Cambric Tapes, and a variety of up-to-date Sealing Machines.

Particular attention is called to their Super Sealer, which, while retaining the basic principle of their former De-Luxe Sealer, is refined to ensure greater efficiency in operation, ease of refilling, and is certainly more attractive in appearance than the former models for the high-class departmental shop or store. The machine itself can be loaded in less than two seconds. One easy stroke of the lever ejects the tape, moistens it, and cuts it off to the desired length, a factor which is of great importance in standarised packing.

Gummed paper tape has undoubtedly come to stay. It has superseded string in every class of business. It is not only a time saver, but much more economical than string. Furthermore, it is impossible to pilfer a parcel once sealed with gummed paper tape without detection.

The firm also manufacture Disinfectant Gummed Coils, Tag Manilla Gummed for Washers, and Gummed Paper in reams and reels.

HAMPSON, BETTRIDGE & CO., LTD., printing, bookbinding, boxmaking and machine rulers' engineers, 2/4, Fann Street, Aldersgate Street, London, E.C.1.

Amongst machines which this firm is showing will be a range of British-made Wire Stitching Machines for printers and boxmakers.

Machinery for loose-leaf trade, including "Multiple" Punching Machines for treadle and power, with self-contained adjustable punch units; Loose-leaf Creasing Machine; Tab-cutting Machine; Paging and Numbering Machines for hand, treadle and power. The power machine has all the latest improvements, and can be run at a high rate of speed.

Automatic Pen Ruling Machines for the highest class of work; latest Disc Ruling Machine with Suction Pile Feeder; Rotary Slot Perforating Machine for run-through and stop work; Rotary Gumming and Fine Perforating Machine for memos, invoices, etc., for sets of 2, 3, 4, 5 or 6 sheets; Gold Blocking Presses; Automatic Self-inking and Wiping Relief Stamping Press; Index Cutting and Index Printing Machines; Platen Printing Machines; Cabinets, Furniture, Woodletter, etc.

A section of their stand is being allocated to a complete range of Cardboard Boxmaking Machinery which will include: Corner Staying Machine; Automatic Folding Box Glueing Machine; Covering Machines; Bending Machines; Folding Box Punching Machine; Thumbhole Punching Machine; Rotary Cutting and Scoring Machine; Slotting Machine.

They are also showing a full range of Bookbinders' Materials, including: Leather, Mull Papers, Tools, Presses, Stabbing Machines, Cloths, and Papers of all descriptions.

HARBUTT'S PLASTICINE, LTD., Bathampton, Bath.

Harbutt's Plasticine Modelling Material; Harbutt's Novlart; Harbutt's Modellit; Home Modelling Outfits; Harbutt's Play Wax, Models, Books, and accessories for modelling, pictures, etc., will be on show.

HARRILD & SONS, LTD., Fleet Works, Norwich Street, Fetter Lane, London, E.C.4.

Are exhibiting a comprehensive range of their well-known machinery, as well as some of their new productions to be shown for the first time. Each machine is the most up-to-date of its particular class.

For those interested in the machine room there will be a representative exhibition of Messrs. Harrild's well-known Cylinder and Platen Printing Machines. These will be of the most improved pattern, and such as will appeal to a very wide field of users, being as suitable for general jobbing work as for best colour work and book production.

A number of new machines bound to interest all bookbinders and manufacturing stationers, including Messrs. Harrild's popular and new-design Perforating Machines, as well as special Paging Machines to suit all classes of work necessitating the very latest time-saving features. They are also makers of a very large series of Blocking Presses, from the small hand-lever to the large four-pillar design, which will be shown as far as space permits.

Messrs. Harrild will be showing some of their latest Plate-finishing Machinery for the stereo and electrotyping department, which will be of interest not only to the stereotyper, but to the machine department manager, who will appreciate a machine which, because of its accuracy in plate-planing, eliminates a great deal of the time now spent on make-ready.

This firm's exhibit for the boxmaking department includes some very special new and recently-designed machinery of special interest to the carton and folding box maker. Their new Automatic Folding, Pressing and Glueing Machine should on no account be overlooked.

C. H. HARE & SON, LTD., Crown Works, Tyseley, Birmingham; and 93-94, Chancery Lane, London.

A full and comprehensive range of Loose Leaf Metals. Their exhibit will comprise Expanding Back Ledger Metals, Endlock and Centre Lock Transfer Metals, and other metals suitable for all record, filing and catalogue purposes. Foremost in their exhibit will be their latest productions in Thong Binders, mounted on plywood boards ready for binding. C. H. Hare & Son, Ltd., are the sole agents of the Irving-Pitt Company, Kansas City, U.S.A., for the sale in this country of Memo. and Price Book Ring Metals. A display of these useful metals will be made in their exhibit.

HARTMANN BROTHERS, LTD., Copenhagen.

One Flat Bag and Satchel-making Machine, Type C.L.H.2.R., supplied with two-colour rotary rubber printing attachment for the making and printing of bags on two sides and in two colours.

One Block Bottom Bag-making Machine, Type B.H.I., for the making of block bottom bags.

One Hartmann Press, Rotary Bag Printing Press, and auxiliary machines.

HAZELL, WATSON & VINEY, LTD., 52, Long Acre, London, W.C.2.

The whole range of Esterbrook Pens, including the celebrated Relief Pen. Drawlet Pens for drawing and lettering, invaluable for writing showcards, price tickets, posters, superior to the brush for lettering and poster work, made in eight styles. Relief Fountain Pens: the only fountain pen that is fitted with a genuine 14ct. gold Relief nib. Ball-bearing Paper Clips: the seating of the balls in their sockets keeps the jaws of the clips in perfect alignment; the grip on the paper is unusually powerful, and the ball bearings facilitate operation.

HELLER & SONS, 96, Wardour Street, W.1.

A large assortment of Rubber Stamps, Stencils, and Inks for the trade.

HEWITT BROS., Field Street, King's Cross Road, W.C.1.

A Modern High-speed Safety Gripper Platen, which is capable of first-class work at a speed of approximately 3,000 impressions per hour, and its simplicity of structure and ease of manipulation should recommend it to all printers, as it combines the simplicity of the Cropper and the capacity of a Victoria at much higher speeds.

A Type-high Testing Machine for testing the height of blocks for making ready at a reasonable price is a novel exhibit.

Stereo and Electrotyping Machinery is also to be exhibited of modern design and construction capable of handling wet and dry flongs, and their Combined Finishing Machine which deals with the whole of the dressing or dressing operations of the plate most expeditiously, is well worth inspection.

A compact Cylindrical Roller Rack of unique construction enabling rollers to be stored in close proximity to the machine, and also provides a con-

venient means for washing up the rollers in one apparatus, a complete double set of rollers of any size being contained in a space of 30 in. circle of floor space.

Die Square Bright Steel Chases, such as the printer now requires as an essential for good-class work and quick make-up, are to be seen, and a well-arranged assortment of Galleys, Composing Sticks, Brass Rules, Mechanical Quoins, etc.

ARTHUR HOLDEN & SONS, LTD., Bradford Street, Birmingham,

Pioneer manufacturers of Varnishes and Coatings for Tin Box Printers and Decorators. For many years they were the only varnish firm supplying the trade. They were also the inventors of the Anti-Acid Non-poisonous Gold Lacquer for the insides of food tins, and their product was subsequently registered under the name Zinnatine. It has an enormous sale, and is universally specified by food packers.

Pasteurising Varnish is another important invention of this firm. Other specialities manufactured are Deep Stamping, Weather Resisting, Non-Alcoholic, Elastic Silver, and Boiling Varnishes, and Black, White and Coloured Coatings for application by the varnishing machine. Messrs. Arthur Holden & Sons, Ltd., have been established close on a century, and their exhibit will show many and varied specimens of their applied products. Expert representatives will be in attendance, capable of dealing with any technical matters connected with varnish and its application.

HUNTERS, LTD., 16-18, St. Bride Street, London, E.C. (works, Wellingborough and Westminster).

A complete range of their well-known Equipment and Machinery for Photo-Engraving, Stereotyping, Electrotyping and Photo-Lithography, including the new Register Printing-down Frame, for the accurate and quick positioning of negatives for photo-litho.

The above exhibits include their latest types of Cameras for reproduction work generally; new types of Arc Lamps for quick exposure and printing down; Routers, Bevellers, Saws, Guillotines, and their new improved type of Disc Edge Trimming Machine.

The "Lafayette" Folding Machine, for single fold job work in two sizes.

A full range of the various sizes of the Improved Golding Jobber, showing the latest models with self-contained electrical equipment, together with one of the earliest machines of this type introduced to the market some 35 years ago, are being removed from a printing office with a view to showing the lasting wear of the machine in question. An exhibit of the winning specimens of the forthcoming Golding Jobber competition will be made at the same time, with announcements as to the names of the prize winners.

The "H.L." Electric Proof Press, in the regular and enlarged models for the rapid production of newspaper and general proofs, the machine being fitted with automatic inking, and capable of the production of 25 proofs per minute.

F. HORSELL & CO., LTD., Manufacturers, Merchants, etc., Victoria Road, Holbeck, Leeds (South).

Amongst a most interesting series of exhibits of interest to the whole lithographic and typographical trade are the following:—

Best Offset, Photogravure and other Printing Inks of all kinds, for all processes; also Dry Colours, Litho and Letterpress Varnishes, Litho Roller Skins (best French), as well also as their well-known Roller Covering Machine, which will be on show, and give demonstrations of the utility and simplicity of operation generally.

The Parker Printing Plates will be in use on some of the largest and best known offset and printing machines in the Exhibition.

They will also show in operation their Patent Graining Machine, which is one of the simplest and yet one of the most effective and easy running machines conceivable.

Further exhibits include Woollen Blankets, Moleskins, Felts, Litho. Sundries and different Transfer Papers, including the well-known and renowned Everdamp "Kesmoi," which is the special transfer paper in the trade.

INTERTYPE, LTD., 15, Britannia Street, King's Cross, London, W.C.1.

Intertype, Ltd., exhibit a range of Intertype Machines with very varied equipment in order to illustrate the principle of standardisation upon which the Intertype is designed and constructed.

The standard basic unit will be shown, with parts to build this up to any capacity from one to six magazines. Demonstrations will also be given of the ease with which magazines, moulds and other parts can be exchanged between machines of different capacity. A full range of display equipment will also be on show, and it will be possible on the battery in use to set anything from 4 to 42 pica ems in sizes from 5 to 60 point. Intertype, Ltd., concentrate on composing machinery, and naturally confine their exhibit to this, but their demonstration includes Intertype Matrices, Border Slides, Spacebands, and many machine parts which are sold for use on other slug-casting composing machines.

Intertype designers have been very busy for some time on a number of important new features, and they will take advantage of this Exhibition to introduce these. Fortunately the Intertype Britannia Street Works are very near to the Exhibition, and the company therefore will have a great advantage in extending courtesies and service to visitors from the provinces who may require assistance of any kind.

The following are some of the Intertype features which will be demonstrated:—

The keyboard touch, which, owing to simplified construction, is much lighter than the old type of composing machine.

The ball-bearing positive assembler and sensitive chute spring, which make transposition of the matrices practically impossible.

The screw-bearing knife block, which makes for faster changes and more accurate setting, especially when odd sizes are needed.

The sensitive gas governor and improved metal pot and mouthpiece, which make for greater capacity, more even temperature of metal, and consequently better slugs.

Intertype moulds, which are more conveniently placed, change more readily, and are cleaner in operation.

Intertype universal ejector, in which solid blades take the place of the old-fashioned sectional blades to great advantage.

Intertype matrices, which are designed and constructed to give greater freedom during distribution and a straighter drop into the magazine, eliminating distribution faults.

Spacebands and spaceband box mechanism and the improvements in same allow for four different thicknesses to be used with ease, and with no fear of clogging.

JENSON & NICHOLSON (1924), LTD., Goswell Works, Stratford, E.15.

Colours and Inks for Lithographers; Poster, Paper and Showcard Varnishes, Celluloid Varnishes and Lacquers for Showcards and Advertisement Tablets, Window Envelope Varnishes, Relief Stamping Varnishes for Relief Stamping Work; Printers' Gold Sizes and Liquid Driers; Stoving Lacquers and General Decorative Varnishes for the Tinplate Printing Trades, including Pasteurising Varnishes; Lacquers for Preserve Manufacturers, Polishing Varnishes, Capsule Lacquers, etc.

FREDK. JOHNSON & CO., LTD., 113, Upper Thames Street, London, E.C.4.

This firm is making a special point of connecting up the Hammermill Bond service with the printer. This is probably one of the most widely advertised business papers known. The advertising portfolios show examples of various departmental forms and styles of printed and embossed letterheadings, and are made out for various specific businesses. The titles of the series are: "Better Letterheads," "Getting Things Done in an Office," "Running a Factory to Make Money," "Quicker Turnover for Your Goods," "The Signal System," "Making More Customers for Your Goods or Your Services." The whole of these lines are, of course, printed on Hammermill Bond, which is of moderate price and can be supplied in the flat in 22 in. by 34 in., 32 lbs. and 40 lbs. plain, linen and ripple finishes. Large stocks are carried for immediate service.

K. JOHNSON & SONS, Erskine Street, Leicester.

A large selection of their well-known "Erskine" cutters. This firm makes every type of cutter required in the printing and allied trades, from plain guillotine knives, oval and circular cutters, etc., to the most intricate and artistic showcard cutters. They will also exhibit a few accessories used in the trade.

WILLIAM JONES & CO., 1 and 3, Silver Street, New Oxford Street, London, W.C.1, the well-known stationers' sundriesmen and embossing press makers.

A large range of Embossing Presses for private or business use, including the small address presses universally known under the names of "Marvel," "Dinky," "Boudoir," and "It." A line for stationers needing no outlay of capital. All the embossing presses manufactured by this firm are fitted with solid steel dies and solid copper counterparts, and will last a lifetime.

Postage Stamp Perforator Presses, Perforator Presses for Receipts, Cheques, Plans, etc., and Perforator Daters.

Rubber Stamps of every description, in the manufacture of which they use only the finest rubber for durability, fitted on highly-polished lacquered brass mounts.

Rubber Hand Daters, Rubber Line Daters, and Numberers, Office and Sign Marker Outfits.

"Marvel" Self-inking Endorsing Pads, the colours of the lids of which indicate the colour of the ink on the pad. Many thousands of impressions can be taken from these pads without re-inking.

"Marvel" Inks: Here again the colours of the labels and stoppers indicate the colour of the ink in the bottle.

"Marvel" Cash and Document Boxes: The cash boxes will be shown in four qualities, from a cheap box with tumbler lock to a strong box with a four-lever lock, and each quality in nine sizes. All the cash boxes are beautifully japanned in black and ornamented in gold. The Document Boxes will be shown in two qualities, five sizes in each, japanned black. Stationers should not miss inspecting this line.

Brass Plates, Copper Plates and Cards, Automatic Numbering Machines, Metal Self-inking Daters, Time Stamps, and many other stationers' sundries.

PERCY JONES (TWINLOCK), LTD., 22-23, Charles Street, Hatton Garden, London, E.C.1.

Percy Jones (Twinlock), Ltd., are exhibiting their full line of 29 distinct kinds of Twinlock Loose Leaf Ledgers.

The Twinlock Thong Ledger of patented design is so constructed that the covers fall back independently of the leaves, giving a flat writing surface to the sheets at every point. Made in three styles—full Pigskin with a back, full Rexine without a back, and full Canvas.

The oval post Patented Thong Transfer Binder, with sectional posts, is made to take sheets slotted for thong ledgers. It is an achievement which fills a long-felt requirement. It will hold up to 2,000 sheets in working, and at a price very little dearer than any ordinary post binder.

The Twinlock Capacity Ledger is also patented as a steel back ledger of new construction. The posts, although quite firm when the ledger is locked, are not attached to the sides of the ledger, and can be removed with the sheets en bloc when the ledger is unlocked. There are round holes in the sheets instead of slots, which do not tend to wear or bend, as is the case in slotted sheets. Further, the life of the sheet is generally lengthened.

Beckenham and Kent steel back Ledgers are smaller loose leaf ledgers, designed for traders who require cheaper books.

The Guardian Post Binder, patented, has novel features. The side channels are round, allowing the covers to lie back, so that the sheets are also very flat. It is extremely simple and strong, and will outlast two ordinary post binders.

The Secure Post Binder is a sound, sensible workaday binder, which does duty for loose leaf systems for every purpose.

The Crown and Sovereign Loose Leaf Binders are small self-contained binders, designed to take from 150 to 200 sheets. They are very sound in construction and very reasonable in price.

Twinlock Ring Books are made for every purpose. For the pocket with ¾in. rings, for Price Books with ¾in. rings. A very cheap and sound book is made for school and college purposes, well bound and neat, with plenty of varieties of rulings. Other Twinlock books comprise Record Binders, Prong Binders, Guard Books, Private Ledgers, Photograph Albums, Minute Books, Analysis Books, Wages Books.

SAMUEL JONES & CO., LTD., Bridewell Place, London, E.C.4.

The manufactures of this firm's mills at Camberwell, Surrey, and Devonvale, Scotland, will be illustrated with samples which have been produced in co-operation with printers in various parts of the country. "Everything that is Gummed" covers the bulk of the Camberwell products.

During the period which has elapsed since the last Exhibition many new and novel lines have been introduced. This development is perhaps most prominent in its relation to stationers' sundries. Gummed Tape in small coils, suitable for home use, is a line with an undoubted future, while the range of music mending and passe partout materials has been considerably augmented. A new line of bottled gum has been introduced to the market, and sells under the name "Nulli Secundus." Not the least interesting feature of this bottled gum is the patent rubber stopper, which obviates the stickyness usually a feature of most gum pots. The firm's range of Sealing Machines has been considerably extended, and now contains nine different models, all of which will be on view.

Messrs. Samuel Jones & Co.'s Devonvale mill will be well represented. As in the case of Camberwell, the various stages of manufacture will be represented with the aid of photographs and raw materials, while samples of the finished products will be on view. Devonvale manufactures include White and Tinted Art Papers and Chromos, Enamels and Surfaces, both plain and gummed. Here also much progress has been made during the past few years, and the samples will illustrate several speciality lines of everyday utility.

Messrs. Samuel Jones & Co., Ltd., carry in stock —purely as wholesale stationers—a large range of papers. Samples—printed and otherwise—will be available on the stand.

JOHNSON & SONS, LTD., Cross Street, Finsbury, London, E.C.

Johnson & Sons, Manufacturing Chemists, Ltd., are making a great display of their now well-known Pastix, the home and office paste.

Pastix is put up in small bottles holding 6 ounces and 12 ounces, and in jars of half gallon and one gallon capacity, and in drums of half. cwt. and one cwt.

Messrs. Johnson & Sons claim that Pastix is *the clean* paste, and they base this on its consistency, which is neither too thick nor too thin, and, as has been cleverly illustrated in their advertising in the trade papers, it does not run out of the bottle should this be accidentally overturned.

The packet for the 6 ounce is most attractive, being a well-drawn and beautifully-coloured carton.

JOHN KIDD & CO., LTD., 11, Wine Office Court, Fleet Street, London, E.C.4.

This firm is showing artistic printed specimens, showing the successful results obtained by printers using their well-known and universally popular Printing Ink and Printing Rollers. The subjects chosen bring into prominence some remarkable illustrations in colour produced by the printer of process work, and the prints will show the general advancement which has been obtained in this class of work since the last Exhibition. Another group of specimens particularly specialise in specimens of offset printing, which method has made such remarkable progress recently. The printer who can undertake the perhaps costly, elaborate and difficult technical part of the work involved in making ready the plates is finding that this offset process, for long runs, presents remarkable advantages owing to its simplicity of operation when once the initial technical difficulties are understood and overcome.

KODAK, LTD., Wratten Division, Kingsway, London, W.C.2.

Film and Paper Line and Halftone Negatives.

Film Negatives and Transparencies for Photogravure and Collotype.

Contrast Specimens showing the advantages of Panchromatic Film.

LANGLEY & SONS, The Euston Press, 6 and 8, Euston Buildings, London, N.W.1.

Catching the eye is one thing, and conveying something to the mind behind the eye is another. There are posters that do one or the other, and there are posters that do both. Langley & Sons, Ltd., have made a study of letterpress posters, and will be showing examples.

Once the only poster-types known were Sans—Blacks—Old Style, and a few "fancy" founts. In those days the woodletter firms must have been in collusion with the ink makers. Their object always seemed to be the designing of letters that covered all the inoffending paper. Just the merest suspicion of white struggled through these splodges of colour to prove that the letters really did represent members of our alphabet! These types from their massiveness no doubt did "catch the eye" of the passing public, but the question of focus or legibility did not appear to have been considered. With a struggle, poster users were persuaded to permit legible types on their bills, but they wanted their money's worth and space was "taken out" with copy. If the printer was not careful, therefore, the passer's eye was neither caught nor was anything much conveyed to the mind of those who stopped to read.

Nowadays there is a galaxy of type. The buying public are realising the competition on the hoardings and the shop fronts. Posters are seen from 'buses and trains—they must say what they have to say clearly and quickly—and they must be attractive to the eye.

Langley & Sons "Langley-type" shows some very interesting results. Quaint effects, silhouettes, flat tints and borders become inexpensive propositions, and the effects seem richer than litho, it being possible to leave a larger body of ink on the paper.

THE LANSTON MONOTYPE CORPORATION, LTD., 43-44, Fetter Lane, London, E.C.4.

This Corporation will have one of the largest and most interesting exhibits. Several Monotype Keyboards and Casters will be shown producing straightforward and tabular composition, and every facility will be given to test the range of possibilities in composition by this remarkable composing machine. There will also be shown the Monotype Typecaster, the popularity of which is very rapidly increasing, as display type cast by this machine is equal to the product of the leading typefounders. In the section devoted to printers' machinery a complete exhibit will be given of the Miller products, including the Miller High-Speed Cylinder Job Press and the famous Craftsman Platen fitted with automatic sheet-feed, both of which will be shown in operation, as well as the famous Saw Trimmer, without which no composing room or foundry is considered fully equipped. The "Boston" Wire Stitcher and other machines of great value to the printer will complete one of the most interesting exhibits in the building.

W. LETHABY & CO., numbering machine makers, 130-132, Clerkenwell Road, London, E.C.1.

Are showing a full range of their " Leda " Numbering Machines and appliances, including the all-British " Leda " No. 2 Hand Numbering Machine with five actions; the " Leda " No. 25 Low-plunger Type-high Numbering Machine for use on platen or cylinder machines; the " Leda " No. 6 Printing Machine Counter (in operation); and a full range of special machines for rotary or flat-bed presses. Other specialities include the " Bates " Rotary Telephone Index, the " Ajax " All-metal Time Stamp. A full range of Dating Stamps for cancelling insurance stamps and for ordinary office work will also be demonstrated.

Several new models are in course of preparation, and it is hoped that these will be completed in time for demonstration at the Exhibition.

THE LLOYD MEMORIAL (CAXTON) SEASIDE HOME, Deal, Kent.

This stand has been erected by the proprietors of The Daily Telegraph in appreciation of the good this well-known and popular seaside convalescent home is doing for the workers in the printing and allied trades, which since its opening has benefited no fewer than 16,000 persons. Regarding the accommodation, each bedroom is furnished with a wardrobe, chest of drawers, looking glass, marble washstand, chairs and rugs, and the floor is well covered with linoleum. There are radiators in every bedroom. Full sized and well equipped bathrooms are provided on each floor, also lavatories with hot and cold water. There is a large billiard room, rest room for ladies, a smoke room for gentlemen, and a large dining hall and concert room. The grounds contain a large bowling green, tennis courts, and clock golf course.

The fascinating attraction will be the Pot Luck Dip—a real gift for everyone, by which means an effort will be made to collect funds to erect self-contained flats at Deal, to let at a small rentage to retired London printers.

Full particulars can be obtained from the Secretary, H. F. Parker, 80, Blackfriars Road, London, S.E.1.

LONDON CLEANING CLOTH CO., LTD., 30, Great Tower Street, E.C.3.

This company supplies Cleaning Cloths under a system whereby the cloths when dirty are returned to them for cleaning. The cloths possess exceptional absorbing powers, and are chemically cleaned. The worn-out cloths are replaced free of charge indefinitely. A supply once bought is thus sufficient for all time, and forms part of one's stock. By using this system considerable saving is effected on the cleaning material account. A free trial over a period of three months is offered to any firm desirous of testing this service. In the event of a firm deciding, during the three months, not to continue the use of the cloths, they are taken back on payment of cleaning only. Intending purchasers have an opportunity of testing for themselves whether or not this system is to their advantage without running any risk. There is no chance of pieces causing trouble by getting into machines or leaving loose ends on rollers and formes.

LORILLEUX & BOLTON, LTD., 31-34, Cursitor Street, Chancery Lane, London, and Eclipse Works, Carpenter's Road, Stratford.

The form of the exhibit of this house will be of special interest to printers in whatever printing process they may be engaged. Specimens of printing in every process will be shown, the inks used being suitable and specially made for the particular process of printing by which the specimen has been printed. In addition to this series, a collection of specimens in all processes is being shown, which have been printed in the ordinary course of work by customers, the inks used having been supplied by L. & B., Ltd. Wherever possible, actual work will be shown, this being a more accurate guide to inquirers for the firm's products.

All the firm's well-known specialities in Driers, Reducers, and Ink Doctors will be also available for inspection. Samples of all specialities apart from inks will be stocked at the Exhibition Stand, and applications for samples will be welcomed. A competent staff will be in attendance, and experts will gladly welcome any special inquiries on colour and technical matters connected with the printing trade in all its branches. Supplies of specimen books and sundries lists showing full ranges of colours used in every process will be distirbuted to callers, and every effort will be made to make the exhibit of real use to printers in whatever class of work they may be interested.

LUDLOW-ELROD, Savoy House, 115, Strand, London, W.C.2.

The value of any production equipment obviously depends upon the economy of its operation, the quality of its product, and the completeness with which it meets all requirements in everyday use. Direct theory only counts when maximum results are realised in performance under actual working conditions. Ludlow users have found in rapidly increasing numbers that no system of single type or of complicated multi-magazine keyboard machines can meet actual composing room display composition requirements as economically and effectively as the Ludlow method.

The more clearly your display composition requirements are understood, the more closely the work of meeting such requirements is measured, the more the principles of the Ludlow for such requirements and work are appreciated. The pronounced success of this method rests squarely upon the practical results obtained by users conclusively demonstrating the superiority of the Ludlow in practice. The Ludlow method is so simple that any compositor can successfully operate it after a few minutes' instruction. From the case, as with type, the compositor sets the matrices in the graduated Ludlow stick. Without preparatory movements or machine adjustments the stick is locked into the casting machine. Almost simultaneously the type slug is cast and the stick automatically released, permitting the matrices to be replaced in the case while the slug is automatically delivered in the galley.

The flexibility of the Ludlow permits a dozen or more compositors, setting different sizes of types and different measures, to use it without any mould or machine change. For example, if one compositor is composing a 6-point line 18 ems and another compositor is setting a 48-point line 42 ems, the machine will deliver both lines without any change whatsoever. Ludlow matrices range from 6 to 60-point. Any

size mould, from 6 to 12-point, is furnished. Ludlow matrices, with ordinary care, will last for many years. Matrices are kept in cases contained in dust-proof cabinets.

There is never any shortage of type, because the Ludlow method provides an inexhaustible supply. You may compose one line or 10,000 lines without hunting or picking for sorts. The Ludlow furnishes a new face for each job. The space occupied for two Ludlows and 200 fonts of matrices is only 16 sq. ft. Ludlow spaces and quads are universal. The spaces which are used in composing 6, 8 and 10-point matrices are also used in composing any other size up to 48-point.

Ludlow italic matrices are unbreakable, and are considered by the trade a real contribution to the printing industry. The Ludlow is a complete all-slug system, and no distribution is necessary after the forme has been printed. The Ludlow combines all the advantatges of moveable type on the one hand with those of the keyboard system (except on long runs of straight matter) on the other.

W. LUNNON & CO., 59, Carter Lane, London, E.C.4.

This firm is exhibiting four of their special leading lines—" Luncover " Art Covers; " Lunco," the inexpensive paper for typewriter copies; " Cobham " cream laids and " Lunco " toilet rolls. These special lines by no means exhaust the list of this firm's attractions, but, since nothing succeeds like success, they are concentrating on a few of their well-known lines. " Lunco," in particular, the inexpensive paper for typewriter copies, will be well to the fore. Offered in white and eight colours, this series lends itself admirably to the departmental working plan so largely adopted to-day, in which a colour denotes a department or section. Emphasis is justly given to the importance of continuity of colour, in which respect " Lunco " is absolutely dependable.

THE MACEY CO., LTD., 65, Houndsditch, E.1.

This firm is making a very complete display of their specialities which are by now very well known to the stationery trade. Prominent amongst their lines are the " Zip " Loose-leaf Notebooks, the smallest of which retails at one shilling. The cover is made of a special material which looks like and wears like morocco. An ingenious method by which the leaves are " padded " in blocks, yet remain instantly detachable, is a leading feature of the " Zip " notebook. Then there will also be a fine display of Masey Loose-leaf Albums, including " Photex," a loose-leaf photograph album which has been very favourably received by the trade. " Storec," an album on the loose-leaf principle containing pockets for the holding of gramophone records. " Philatex " Loose-leaf Stamp Albums for philatelists will also be on view.

Another Macey line of great interest is the " I-P " series of Loose-leaf Ledgers and Ring Books. The " I-P " Ring Binder contains a mechanism in which the rings open and close so perfectly that their actual point of junction is almost imperceptible. This feature means, of course, a much longer life for the leaves. The range of " I-P " Ledgers includes the famous " M " type, which is unique in the manner in which it opens to its fullest capacity by a simple turn of the key and is firmly closed by simply pressing the two sides together.

GEORGE MANN & CO., LTD., Gray's Inn Road, London, W.C.1.

Many important developments have taken place since the last Exhibition, and this firm can be depended upon to provide something of great interest to the lithographic sections of the printing trade, including the very latest manufactures.

JOHN T. MARSHALL, Hotspur Works, 36, Powell Street, Goswell Road, London, E.C.1.

The following machines of the J.T.M. series are being shown: Thread Stitching, Case Rounding, Calendar Rimming, Confetti Making, Board Bevelling, Powerful Stabbing, Letter File Creasing, Cream Mug Making.

MERRY & MINTON, Westminster Works, Alcester Street, and Cheapside, Birmingham.

The chief exhibits are high-class Varnishes, Lacquers, and Enamels for Tin Printers. These will be shown on the stand in glass tubes, and also the raw materials from which they are made.

MONOMETER MANUFACTURING CO. (1918), LTD., Savoy House, 115-116, Strand, London, W.C.2.

This company is showing the " Supertype " Composing and Typecasting Machine, which is creating such interest among printers all over Europe. This machine casts single type in one operation direct from the keyboard, and the assembled type in perfectly justified lines is automatically set up in front of the operator as produced. The casting speed averages 200 characters per minute, and is appreciably too fast therefore to be overtaken by the most skilled operator. Three separate consecutive lines may be in process of composition simultaneously, one line being cast while another line is " awaiting " and a third line " assembling." This is of great advantage, obviously, in narrow measure composition.

The unique and distinguishing feature of the " Supertype " is that the matrices are presented to the mould orifice singly—one by one till the completion of the " take " or portion of the " copy " being handled. Distribution is continuous, not more—and usually less—than 24 matrices being in process of distribution at once, as released by the elevating mechanism. The operator is enabled thus to proceed at his maximum speed, irrespective of the line width or measure. Another important and distinctive feature is that all matrices are of equal thickness. This permits of the use of a great number of matrice channels in each " magazine," and eliminates many mechanical difficulties hitherto encountered in magazine design and details. The manufacture of matrices in bulk is also simplified. The matrice character is punched on the side of the matrice. There are no " space bands " or expanding spaces. The space matrices, including the variable or " justifying " space, are presented to the mould orifice in the same way as character matrices. Justification is automatic, and quite independent of manipulation by the operator. A system of multi-justification, for use in tabular work, is embodied in the mechanism, and provides for two, three, or four justifications in any given width or "measure."

NEW PEGAMOID, LTD., 134, Queen Victoria Street, London, E.C.4.

The world of printing and bookbinding is fully alive to the fact that the saying " There is nothing like leather " is quite out of date owing to the articles which are now used and known to be superior to leather for certain purposes. Those who have yet to learn the truth of the statement have only to visit the exhibit of New Pegamoid, Ltd., where they will see examples of imitation leather and other waterproof products which are now generally used and much appreciated for the properties which they possess, and which render these superior to leather for the purpose in view. For no one who has had the necessary experience would ever dream of using leather for the binding of heavy account books, share registers, loose-leaf ledgers, and such works, when they can obtain a leather cloth for the purpose which, while having the exact appearance of leather, is much cheaper and has a much longer life.

Again, the extraordinary variety of grains and finishes which can be obtained in the manufacture of this type of leather cloth gives a vast scope of choice for the manufacturers in the bookbinding, fancy and case-making trades, while the chamois finish which has lately made its appearance is a most perfect article for the variety bag makers. This particular finish resembles the real article so closely that it takes an expert to see the difference between the two, and it has an additional advantage in that, being waterproof, it does not soil easily. Then, for the printer, there are various waterproof cylinder cloths, which are much in demand in these days, including the new black dressed blankets for rotary and flat-bed machines, and the waterproof and greaseproof take-off sheeting. For yet another world the special map and poster cloths which are being shown will appeal, for they are impervious to atmospheric changes, and are therefore essential for the printing of notices in exposed places, transparent advertising posters, etc.

W. R. NICHOLSON, LTD., 61 and 63, Scrutton Street, Finsbury, London, E.C.2.

The question of reliable rubber blankets and lithographic plates is ever an important one to the offset printer for the production of good work, and visitors will find their requirements fully catered for by an inspection of the exhibit of this firm. After many years of experiments, backed by sound practical knowledge, they have got their rubber offset blankets to a high state of perfection. These are made true to gauge, within one-thousandth of an inch, of even thickness throughout, and they wear well. Both Aluminium and Zinc Lithographic Plates are being shown in a variety of surfaces suitable for chromo, commercial and poster work. Simplicity in working these plates has been their chief aim. In addition will be shown all the various materials and sundries necessary for the lithographic printers.

W. T. NICHOLSON & CLIPPER CO., LTD., Clipper Works, King Street, Salford, Manchester.

The Improved " Klincha " Lever Belt Lacing Machine embodies many improvements, the principal features of which are as follows: Detachable magazine facilitating the insertion of the hooks into the machine when making the joint, and improvements enabling the machine to be operated with one hand, leaving the other free to hold the belt in the correct position while the joint is being made. It should also be mentioned that the " Klincha " belt fasteners are now mounted on an outside paper strip and built up in 12 in. lengths, preventing any lateral displacement, and making it easier and quicker to place the fasteners in the machine. The fasteners can be readily cut to any length required without disturbing the hooks. It is not necessary to take off the strips to insert the belting between the hooks, which are held in correct position and spacing independent to the slots of the machine, and thus no time is wasted in straightening out displaced hooks, as occurs with other carded types. Joints made with the " Klincha " system are flexible, detachable, interchangeable, smooth-running, and will run round the smallest pulleys without knock or jump. No skill is necessary or stoppage of machinery involved. No wastage of time and materials, and no projections, consequently no danger to workman.

The Improved " Klincha " Vice Tool is a 4 in. machine intended for use on an ordinary vice, specially suited to small users of belting.

The well-known 3 in., 4 in., and 6 in. " Klincha " Mallet Tools are now made for use with the improved type of fastener.

The " Python " File and Tool Handle has a steel coil spring pressed into the centre which is secured in its place by a specially-designed ferrule. These two together take up all the pressure when the file is driven into the handle. The ferrule cannot be removed without destroying the handle. The handle grips the file tang much firmer than the ordinary handle, because the wood is compressed within the coil spring when the file is driven in. Should a " Python " handle split or the ferrule become detached it is replaced free of charge.

The Improved " Klincha " Belt Cutter can be operated with very little outfit, and leaves one hand free to hold the belt in correct position. Cuts and squares the belt with perfect accuracy, thus obviating any uneven strain on belt when running. The knife arm lifts up to allow the belt to be put in place without being threaded under the knife. Absolute safety is guaranteed, safety guard covering the blade, making it impossible to cut hands or nick belts. The knife can be dropped from upright position with man's fingers on knife bed without cutting, as the cutter does not operate until the power is applied by lever.

The " Klincha " Belt Cutting Shears, one of the cutting blades of which is furnished with saw teeth inclined towards the handle. These teeth hold the material fast and prevent its slipping towards the point of the shears. Leather, balata and woven belting, sheet rubber washers, strips, and soft packing materials can be readily cut with square or inclined edges by this method.

NICKERSON BROTHERS, 99 & 101, Worship Street, London, E.C.2.

This very old established firm of leather manufacturers, whose works are at Alscot Road, Bermondsey, S.E., are exhibiting all classes of leather, of which they are the actual manufacturers, as used for the bookbinding and fancy trades, including Moroccos, Roans, Calf, Skivers, Hides, Persians, Basils, Pigskins, etc., etc. The various kinds of leather will, of course, be shown in the numerous styles, finishes and shades that have brought leather manufacture to a fine art. This firm make a speciality of leather for the bookbinding trade, and their exhibits will be of interest to both account book manufacturers and letterpress binders alike, to whom they extend a hearty invitation to their stand in the gallery. A visit here would soon convince one that the old saying, " there is nothing like leather," is as true as ever.

NORMAN & HILL, LTD., 54, Holborn Viaduct, E.C.1.

The speciality of this firm is the " Lefax " System, which consists of Pocket Books of a large variety, and forms part of a Standard System for Business and Technical Purposes, combined with a simple Filing System. The users of these books have a choice of some 150 different rulings, which include those in everyday use, business forms, diaries, squared and sectional papers, graph and log charts, etc. All sheets have a filing index and are interchangeable between desk pad, pocket book and file. This system is equally useful for business, *i.e.*, salesmen, works managers, storekeepers, etc., and also for technical purposes, by which data and memoranda can be filed. Filing boxes in variety are being shown for filing sheets for immediate reference. There are also over 5,000 reference data sheets in connection with this system; these are loose-leaf, and the customer can choose just the subjects which are of interest to him.

This firm are also showing Ring Binders of every description up to 17 in. deep and any width. The Envelope Sealing Machines are the " Standard," which will seal 200 envelopes per minute.

W. NOTTING, LTD., 18, 19 & 20, Bowling Green Lane, London, E.C.1.

This firm specialises chiefly in the manufacture of high-class composing-room materials and accessories, and their exhibit includes a comprehensive display of Steel Chases, Steel Interlocking Furniture, Cast-Iron Furniture, Brass Rules, Mechanical Quoins, Brass Rule and Lead Cutters, Mitreing Machines, and in addition various systems for Plate Mounting and Grooved Mounting Beds. The latter are now being extensively adopted, particularly in the production of periodicals, etc., owing to their time-saving advantage in making ready.

Of particular interest to compositors is the " Universal " Composing Stick, of which Messrs. Notting are the sole patentees and manufacturers (the selling agents for Great Britain being Messrs. Stephenson, Blake & Co., Ltd., and for Australasia Messrs. F. T. Wimble & Co., Ltd., Sydney). This stick has been very favourably received and extensively sold. The accuracy and ease with which it is set are the chief features. By means of a locking clamp always meshing with a highly accurate machine-cut rack, a positive setting is ensured, which can be absoiutely relied upon. An additional lock is also provided by means of a clip and thumb screw.

Messrs. Notting's also manufacture extensively Steel Rules, Steel Rule Bending Machines, and Steel Rule Cutters, all of which will appeal to those interested in the folding cardboard box and carton business.

THE NUCARD COMPANY, LTD., 57, Farringdon Street, E.C.4.

This company will exhibit the following:—Nucard Platen Machine, the Nuemboz Machine (embossing without the use of steel dies), the King Stereo Outfit, the Nucard (Patent) Automatic (Gum or Paste) Label Machine, and printers' sundries.

THE ORIENTAL LEATHERETTE CO., LTD., 14, Sun Street, Finsbury, London, E.C.2.

Are showing a very fine range of Coated Papers of all descriptions. They will especially appeal to boxmakers. bookbinders, printers and others interested in the covering of articles with a substitute for leather, which give a choice effect and help to determine the sale of the article. All the papers formerly shown by Messrs. Harrison & Sons, Ltd., will be included, these consisting of Calf, Surfaces, Enamels, the well-known series of " Suede " papers, Gilt Embossed Calf and Surface, Printed Embossed Dull Enamels, and Matte Gold Papers, all of which are suitable for the covering of boxes and many other articles. In addition there are special papers for Attache Cases, Book End Papers, Matte Black Papers and Coated Boards for Cartons. The old " Oriental " papers, which include the cheaper grade of Leatherette, together with Varnished Papers, Imitation Book Cloth and a special line of Fancy Two-colour Leatherettes will be shown. Those who are looking for something new in the way of covering will do well to visit the stand, as several new lines of fancy papers suitable for new season's goods will be included.

PICTORIAL MACHINERY, LTD., 7, Farringdon Road, London, E.C.1.

Are making a special display on their stand of their new improved No. 2 " Lithotex " Step-and-Repeat Machine, and during the Exhibition talks will be given by various demonstrators showing the advantages of the machine. As at the last exhibition, the step-and-repeat machine will be exhibited in a dark-room, and the various points of the machine explained to craftsmen and inquirers.

In addition to the latest step-and-repeat machine, together with a large number of negatives and specimens of prints made by various users, the company will show " Lithotex " Printing-down Frames, Arc Lights, and their latest " Pictograph " Process Cameras, and other general items of interest to the trade. If space is available, the company hopes it will be possible to show also the " Printex " Negative Printer in operation.

At stated times demonstrations will be given of the advantages of the Douthitt Diaphragm-Control, the appliance now of almost universal use in process establishments for the standardising of process negatives, and which is so much heard of from America, and also from users here who have tested same.

The advantages of " Pictograph " Chemicals, Collodion Negative Paper, etc., will also be explained and demonstrated.

POLLARD & CO., LTD., 33-7, Cloth Fair, and 6-7, Kinghorn Street, E.C.1.

Pollards are making a special exhibit of high-class goods of their own manufacture, amongst which will figure the following special and in most instances proprietary articles:—

The " Topless " Centre-action Rubber Band Dating and Numbering Stamps (British Patent No. 789,195). The principle of this stamp is to operate the rubber bands with a minimum of inconvenience and without either hurting or soiling the fingers. A large and comprehensive assortment of sizes, styles, etc., to meet all requirements will be on view.

The " Two-in-One " Self-Inking Pad (Patent No. 165,677). This consists of a self-inking pad, occupying about three-fourths of the interior of the tin case, the remaining one-fourth being fitted with a brush of specially prepared bristle for cleaning stamps when necessary. It is put up in a well finished decorated tin in yellow and black, and made in three sizes and all colours.

" Visfaes " (meaning visible face) Indicator (registered No. 32,028). This is a simple means for identifying stamps, and consists of a solid ivory disc let in flush with the top of the handle, with abbreviated wording of the stamp indelibly engraved thereon. All stamps now supplied by the firm are fitted with " Visfaes " indicators without extra charge

The " Commonwealth " Self-Inking Pad, made in five sizes and all colours. This pad has been on the market for nearly fifteen years, and continues to gain in popularity. One special feature which is of very important interest to stationers who stock these goods is that the manufacturers guarantee these pads will keep in stock, if necessary, for a period of twelve months without deterioration, and if at the end of that period any pads are found to have become dry they are replaced free of charge.

Solid Rubber Type. This is made up in various size founts, half type high, on the point system.

Office Printing Outfits. A well-known series of four sizes, assembled in attractive cardboard boxes, with self-inking pad, tweezers and holder.

Sign and Price Markers for making up Notices, Tickets, etc., assembled in polished wood boxes, with all necessary accessories included.

The " XL-All " Quick-drying Self-Inking Pad, in all sizes and colours. The quick-drying properties of this pad will be demonstrated at the stand.

Rubber Stereos for Bag Printing Machines, for use with either letterpress or aniline inks. A comprehensive range of these will be on view, and should prove of special interest to firms using or about to lay down machines for doing this class of work.

Aniline Dye Inks for Bag Printing Machines, in all colours.

THE PRINTERS' MEDICAL AID AND SANATORIA ASSOCIATION. Offices, 30, Fleet Street, E.C.4.

The outstanding idea of this exhibit is the fully-equipped First Aid Station, where members of the Printers' Division of St. John Ambulance Brigade will be always on duty to attend to such casualties as may arise. They also specialise upon First Aid Equipments, now so necessary in every shop or office, and a variety of these will be shown. A number of surgical appliances, such as are issued to P.M.A. members, will also be on view, as well as up-to-date views of the various Homes and Institutions with which this Association is allied. Pamphlets upon Welfare Work and General Health Hints will be given to callers at this stand.

JOHN RATCLIFF & SONS, LTD., printers' engineers, Wortley, Leeds.

Are showing one of their latest type fast-running Rotary Tinplate Printing Machines. These machines are now in operation in some of the largest tin-printing firms in the world, and are giving an actual output of the finest register work of 10,000 printed sheets in an eight-hours day. They also show one of their new Rotary Offset Paper Printing Machines, which they claim as the most simple and up-to-date offset press made.

THE REGENT PUBLISHING CO., LTD., 310, Euston Road, N.W.1.

Are showing the following goods: Christmas Cards, Calendars, Postcards, Cabinets, Albums, and View Novelties.

THE REMBRANDT INTAGLIO PRINTING Co., Ltd., 8, Bream's Buildings, Fetter Lane, E.C.4; and Queen's Mill, Lancaster.

Machine-printed Photogravure in one and three colours. The Monochrome work produced by this company is very well known, and needs little comment, except that the pre-war standard is, if anything, improved on. Sizes are shown up to 40 in. by 30 in. The Rembrandt three-colour work is, without doubt, the finest in existence, and can be printed up to 30 in. by 30 in., or a small number of suitable subjects can be printed together. To anyone interested in high-quality reproduction, both in monochrome and colours, a visit to this stand will be most profitable.

SALICUM, LTD., 332b, Goswell Road, E.C.1.

This firm specialises in the production of Adhesives for all classes of box-making machines, etc., and some of their latest productions are claimed to have great advantages over hot glues. It is the aim of most box-makers and manufacturing stationers to get away from the old-fashioned methods of using hot glue, which generally leaves a smell of varying intensity in the finished products. It will doubtless repay such manufacturers to spend a while at this exhibit. It is unnecessary to state that practically all the adhesives shown require no heat in their preparation or use.

Among other interesting exhibits is a new Envelope Gum which is claimed to be tasteless, extremely strong, and above all will withstand the great humidity of atmosphere experienced in the tropical regions.

Cold Glues and Gums are shown at the Exhibition on gumming machines, and will be seen during the Exhibition working under practical conditions in the showrooms of this firm at 332b, Goswell Road, on a complete Jagenberg box-making plant. A large and varied display of Gummed Tapes and Corner Stay Papers will also be shown.

Messrs. Salicum claim that only the finest Swedish kraft paper and best British glues are used in the manufacture of these gummed tapes and corner stay papers, a combination which undoubtedly produces a finished article of outstanding merit. Printed gummed tapes are also sold in large quantities, and, as these are now recognised as one of the most efficient ways of advertising a firm or its products, the display of advertising tapes should be of great interest to visitors to the Exhibition.

JOHN SHAW & SONS, Ruling and Perforating Machine Makers, Honley, near Huddersfield.

Two Ruling Machines and one Rotary Perforating Machine.

They are also showing one of their latest 42in. wide Double Striker Pen Ruling Machines, which will contain a number of improvements and additions of great interest. Messrs. Shaw have gone thoroughly into every detail of these machines, and have made many refinements. Attached to this machine will be the " Bailey " Patent Perforator Attachment, which enables ruling and perforating to be done at one operation. The machine will be driven direct by motor by a series of gear wheels.

They are also showing one of their " Super-Imperial Double Sider Disc Ruling Machines, with Ruling Cylinders 43¾in. in circumference, and long Ruling Cloths. This machine will both feint line and strike four colours on both sides of the sheets at one operation, and will rule sheets up to 39in. wide. It will have attached the " Bailey " Patent Rotary

Perforator Attachment, and also " Shaw's Patent Sheet Cutter. Thus both ruling and perforating and cutting can be done at one operation. This machine will have attached their new patent pile suction feeder. No knives or points are used on this feeder, and the edges of the sheets are not therefore cut at all. This machine will be driven direct by motor.

They will also show one of their " New Imperial " Rotary Perforating Machines for straight-through perforating and striking, to perforate sheets up to 36in. wide. This machine will do several operations —slot perforating, fine perforating, scoring, bending, creasing and slitting. This machine will be driven by separate motor.

All these machines will be actually in operation during the whole of the Exhibition.

SHUCK, MACLEAN & CO., LTD., Printing Ink Manufacturers, 3 to 7, Gunpowder Alley, Shoe Lane, London, E.C.4.

Shuck, Maclean & Co., Ltd., have their usual position in the Hall, and are exhibiting specimens of their well-known specialties in Offset, Trichromatic and other Printing Inks.

CHARLES SKIPPER & EAST, 49, Great Tower Street, London, E.C.3.

(1) Binding (Commercial Books, Ledgers, etc.).
(2) Secure Documents (Letters of Credit, etc.).
(3) Note Headings and other printing.

H. C. SLINGSBY, first international truck builder. Chief sales offices: 89, 95 & 97, Kingsway, and 71, Great Queen Street, London, W.C.2; 22 et 22 bis, Rue de Chabrol, Paris, France.

A selection of about 60 from over 1,900 varieties of trucks, including the Slingsby Sliding Wheel Patent Trucks; Slingsby Collron Patent Sack Trucks; Slingsby Steelback Patent Extension Ladders; Slingsby Steelheld Steps; Slingsby All-Steel Wheelbarrows; Slingsby Handcarts of all kinds; Slingsby Sliding Wheel Patent Jacktrucks; Slingsby Jacklift Patent Master Trucks; Slingsby Singlelift Patent Elevating Trucks for light loads; Slingsby Automatic Electric Trucks; Stackers; and Slingsby Service Castors.

SPALDING & HODGE, LTD., Drury House, Russell Street, Drury Lane, London, W.C.2.

This old-established firm of paper merchants are showing the various papers they make for the printer. This range covers a printer's every possible need. They are well abreast with the times in producing papers specially made for offset lithography, a new features being Excelsior Offset Chromo, the dull-coated surface enabling the lithographer to produce brilliancy of colour and minuteness of detail which cannot be obtained from an uncoated paper. The Superfine Offset Cartridge is also worthy of attention, the purity of colour and eggshell surface being very pleasing. Cheaper grades in Drury Antique and Aldwych Antique quality show that the offset lithographer is well catered for here. One of their leading lines is the well-known Excelsior Coated Art (white and creamy), a favoured medium where best-class colour work is desired.

Amongst the multitude of Writings are their high-grade Tub-sized Cream-laid and Wove Papers, and amongst the Bonds the watermark British Dominion Bond, United Service Bond, and Kingsway Bond will be shown.

SPENCER & COOK, LTD., Empire Works, Stalybridge, and 14 & 16, Bishops Court, Old Bailey, London, E.C.4.

Various Semi-Automatic High Speed Folding Machines, including their New Model Job, Book and Magazine Folders, which will have parallel folds in combination with right angle folds. An Exercise Book Folding Machine is also being shown. Another machine exhibited is the Mark Smith Vacuum Flat Bed Bronzer, as also a Vacuum Table Bronzing Machine. Sample Waste Paper Bales, the product of their hand and power presses, as also tin scrap bales will be on the stand. Amongst other items will be included their patent Platen Guards.

H. H. STARK, LTD., 193, Whitechapel Road, London, E.

A comprehensive exhibit of Warehouse Trucks, Box Trolleys, Handcart for delivery work, Lifting Trucks and Platform, Skids, Ladders (extension and plain), Steps, Wheels and Castors of all kinds. Everything on the stand will be specially selected as suitable for the printing and allied trades, and Mr. Stark, who has had over 28 years' experience in the truck, trolley and ladder trades, will be in attendance during the show.

J. B. STONE & CO., LTD., 135, Finsbury Pavement, E.C.2.,

Are showing the " Wilson " Patent Nibbling Machines, which have been specially designed for the rapid cutting of all kinds of sheet metal, including cast steel. The machine consists of an overhanging arm carrying a rapidly reciprocating punch of small size, which works over a female die carried by the bed plate. The feed is governed by a small stop on the extreme end of the punch. The metal is fed against the pin, allowing a small portion of stock to be removed with each stroke of the punch. This arrangement permits the cut to be from any direction, the value of which is readily recognised. The machine is simple, but strong in construction, and good work can always be produced. The cutting tools are easily and quickly inserted and removed. The punches are formed from a specially alloyed steel correctly tempered and ground to size, insuring uniformity and long life. They are double-ended, and may be inverted when the cutting edge of one end becomes worn, thus minimising tool costs.

They are also showing the well-known " Alligator " Belt Fasteners, a detachable steel belt lacing hinging on a rawhide or sectional rocker pin. The flexible joint ensures quick contact with the pulley, whether the belt is run with either or both sides in service, and as the lacing engages both sides of the belt alike, the strain is thrown in a direct line of the pull, making a joint which is easy on the belt, and where applied according to directions will stand any strain put on a belt under any conditions of service. With rubber or textile belting this lacing overcomes the tendency to fray at the ends. It will work prfectly in contact with an idler pulley or on serpentine drives. The joint lasts long and saves repairs. It combines the essentials demanded of a modern belt joint—strength, smoothness, flexibility, and simplicity of application. " Just a hammer to apply it." The lacing is made in all sizes, ranging from No. 00 for tapes up to 1-16 in. thick, to No. 75 for belts $\frac{5}{8}$ in. thick, and no one interested in machinery beltings should fail to see this lacing, and have the method of applying it demonstrated.

Bar Belt Dressing is also shown. This has the advantage of no waste, as friction will affect an even distribution of the least quantity necessary to prevent slipping.

JAMES TAYLOR & SONS (CLECKHEATON), LTD., Cleckheaton.

Examples of their well-known Stitching Wire, in which they have specialised for over forty years, during which time they have gained a thorough knowledge of the trades' requirements. All their wire is drawn from a selected metal which they have proved by experiment and experience as the very best for stitching purposes, and is drawn straight from the rod specially for that purpose. Billets of wire, rods $\frac{1}{2}$in. to $\frac{1}{4}$in. thick, and wire in different stages will be shown in the endeavour to give an idea of the various processes through which stitching wire goes. Round, narrow, and broad flat wire in bright, coppered and tin finishes, wound in coils, and on large and small wooden and iron spools will be shown; also a number of their special detachable spools for use in conjunction with wire wound in coils.

THE TELLA CO., LTD., of 22, Devonshire Street, W.C.1.

Are acting as official photographers to the Exhibition, and will have an interesting display of Photographs, Process Blocks and Commercial Artists' Retouching. Their organisation and experience enables them to undertake at short notice any commercial photographic work, distance or individual trade technical requirements presenting no difficulty. Operators are continually being sent from London to all provincial centres, thereby enabling them to execute orders at a minimum of expense.

The Tella Display Cabinet and Tella Photo Transparency will also be interesting features of their exhibit. The former has been specially designed to overcome the difficulty presented by limited area when desiring to display photographs and other illustrative matter. The cabinet contains twelve swinging arms carrying mounts, which can be changed at will. The Transparency is an inexpensive form of illuminated publicity, being a genuine photographic production giving a beautiful scale of gradation.

The Tella Co. also specialises in the production of illustrated books and articles dealing with all kinds of technical subjects. Illustrations consist of photographs and diagrams, the former being principally used in articles of the " How to Make " variety, with the object of assisting the reader to the greatest possible extent. The Tella Co. will have a large staff of operators in attendance throughout the entire run of the Exhibition. Exhibitors placing orders are thereby assured of their commissions receiving prompt and efficient attention.

THOMAS & BISHOP, 37, Tabernacle Street, E.C.2.

Cling-Surface and Erusa Belt Treatments. The advantages obtained from the treating of a belt with Cling-Surface will be demonstrated on the plant shown, which will comprise a motor driving a countershaft by means of a leather belt, running vertically, and from the countershaft to a 4-kilowatt generator by means of two belts running horizontally, one belt being treated and the other untreated. The increased efficiency of the treated belt will be shown, as against the untreated belt, by means of a voltmeter and a bank of lamps.

Permac Jointing Material. The universality of the use of Permac, combined with its efficiency and extremely cheap initial cost, will be demonstrated by a series of joints, which include flanges, screwed-piping, traps, etc. Water at a pressure of 250 lbs. per square inch will be employed, and joints broken and re-made at all times of the day, proving the claim that no time is necessary for setting when Permac is employed.

A working model will show various types of Lubricators using this firm's Flexo Grease, which is manufactured in nine densities. This variation is an important feature, and only applies to grease made by this firm.

Flexo Leather and Textile Belting. The high quality of these belts has been established for many years, as they are, by a unique process, treated with Cling-Surface preservative during the course of manufacture; they can be fitted direct, without any preparation, and will take up full load immediately on being put into use, without fear of slip, and, most important of all, without any initial tension.

Oil Reclaiming Plant. This plant, whch is not a filter, will demonstrate method of reclaiming dirty oil, and a sample of cleaned oil will be shown from it on request.

T. C. THOMPSON & SON, LTD., Buxton Street, London Road, Manchester.

The following are being shown by this firm :—

The " Gem " Hand Clamp Guillotine. Made in three sizes—24in., 26in., and 32in. These are the rotary type, with a powerful worm gear action. The 26in. and 32in. machines can be fitted for power, and have an interlocking back fence which can be brought within $\frac{3}{4}$in. of the knife.

The Patent " Gem " Platen Press. Made in two sizes—8in. x 5in. and 11in. x 7in. They are open across the platen and admit any size of sheet; are smooth and silent running, and are fitted with patent Toggle Action, which gives a prolonged dwell on both feed and impression, and enables them to be easily fed when running at the fastest speed.

" Oxford " Perforators. The Treadle Machines are made in three sizes—18in., 24in., and 30in. The Power Machines are made in two sizes—24in. and 30in. A special feature of these machines is that the sections are sliding as well as lifting, which is a big advantage when doing stop-and-gap work.

Cross Cut Perforator. This machine has been specially designed to meet the requirements of the cheque book printer. It perforates 32in. long and has three 9in. adjustable cross perforating heads. The distance between the heads can be varied from 2in. upwards. Each head can be put out of action if required and additional heads can also be fitted.

" Rapid " Combined Self-Feed Punching and Eyeletting Machines. These are made both single and double headed. They punch the hole and automatically feed and insert the eyelet at one stroke. The double headed machine is invaluable for showcards, calendars, etc., and the distance between the eyelets can be varied from 2in. to 6in.

Paging Machines. Single headed machine for treadle only, of an improved design; perfectly balanced action; can be worked at lightning speed and is very easy to treadle. Double headed machine can be fitted for treadle or power; is fitted with two adjustable paging heads, both of which can be instantly moved to any required position. This machine is specially designed for cheque and receipt book work. It can also be fitted with extra numbering heads.

Also Nipping Presses, Standing Presses, Roller Galley Presses, Stereo Apparatus, etc.

TIMSON, BULLOCK & BARBER, Ltd., Royal London House, Finsbury Square, London, E.C.2, and Perfecta Works, Kettering.

This well-known house will again display its speciality, Rotary Printing Machines, for which it is renowned. They have made many valuable improvements to their numerous constructions of late, and presses of the very latest types will be shown. During the years that have elapsed since the last exhibition, small jobbing rotaries have commenced to come into their own, and Messrs. Timson, Bullock & Barber, Ltd., propose to exhibit, in addition to other types, one of their " Combined " type " Efficiency " Machines, specially designed for jobbing and similar work. This particular rotary press might well be called a composite machine; it is capable of giving an astonishing performance, and its output compared with flat-bed machines is prodigious. Single- or multi-colour printing and perfecting are its everyday capabilities, and when other features are required, owing to its special equipment, auxiliary units, such as folding, perforating and numbering, can be brought into use. Its possibilities are unbounded for long runs, and the veriest sceptic cannot fail to be impressed. Its operations are continuous, working from a web, and as the printed product leaves the press it is cut into sheets. A small machine will turn out 24,000 folded octavo forms per hour.

Another remarkable machine will be this firm's Rotary Carton Machine. These machines are built to print single- or multi-colour, crease or score thin board, cut to size, strip away the waste, and deliver finished cartons at a tremendous speed, 400 or more per minute. Last, but not least, will be a Rotary " All-Size " Machine, printing and re-winding. This press is arranged to print one or two colours, and owing to special devices, the printing distances can be varied, thereby eliminating an old objection to rotary printing and re-winding machines.

G. F. TOMKIN, 626, High Road, Leytonstone, London, E.11.

Will show specimens of lino setting for the trade (set on Intertype machines) suitable for good-class work. He will also show his Century Paper Calculator and Ready Reckoner. This book gives prices of paper for job printing in the most up-to-date form, including, if desired, handling costs at various percentages.

FREDK. ULMER, LTD., Great Saffron Hill, London, E.C.1.

During the last two years this firm has made additions to their joinery factory, which is now one of the best equipped of its kind. They have concentrated upon dust-proof models, and propose to show at the Exhibition the most up-to-date and efficient examples of this class of joinery. It will be possible to select a complete outfit for the composing room from models which they will show, and this, coupled with the fact that they are in a position to supply everything for the printer, including machinery, should make it possible to procure a complete outfit from their products.

Fredk. Ulmer, Ltd., are also exhibiting a large range of Wood Type, and in this connection it may here be stated that they have a large department equipped with the most up-to-date machinery.

USHER-WALKER, LTD. (Usher & Co., and Walker Bros.), Usher-Walker House, Great New Street, E.C.4.

Messrs. Usher & Co. are exhibiting an extensive range of Dry Colours, Inks for all purposes, and Rollers, including specimens of their patented "Vigeo" Roller Composition, which, although possessing all the best points of a really good roller, has the additional feature that it is absolutely infusible—it will not melt or run soft in any circumstances, whether the extreme heat be atmospheric or frictional.

Messrs. Walker Bros. are showing a range of their latest machinery, which will include the well-known Premier Two-Revolution Press, the Colt's Armory and Laureate Platen, and the John Thomson National Cutting and Creasing Presses. These will all be in operation, producing commercial work under everyday conditions. The exhibit will also include many other items which will be of enormous interest to every progressive printer and box-maker.

VICKERS, LTD., Vickers House, Broadway, London, S.W.1.,

Are showing a selection of their latest models of Cardboard Boxmaking and Wire Stitching Machinery.

This includes two sizes of their new type Corner Staying and Ending-on Machine (one of them driven by self-contained electric motor). Features of these machines are the special link motion and positively-operated paper gripper. These new departures eliminate the return and friction springs on the earlier models, and by reducing the working stresses in all parts of the mechanism, allow of unusually high working speeds, and that without loss in reliability or in the quality of the work produced. Absolute protection is afforded by the patented Safety Guard fitted, and very low maintenance costs are claimed for the machine, as well as perfect reliability.

Another machine is their well-known general purpose Box Stitcher for all thicknesses, from zero to $\frac{3}{4}$ in., with automatic thickness setting. This machine can now be supplied with a positively operated Safety Guard, and this extra fitting will be shown.

A heavy duty printer's Stitching Machine, to take all classes of work up to $\frac{7}{8}$ in. thick and fitted with a universal table for saddle and flat work, is likely to attract attention, as also a new form of Metal Edging Machine, capable of high working speeds, and fitted with a Safety Guard similar to the Corner Stayers.

The Acme Banding Machine, with Automatic Paper Feed and Gluing Rollers, is to be shown, and Messrs. Vickers hope also to have ready for exhibition two entirely new machines which they are now developing. These will excite the interest of box-makers seeking to increase output without enlarging their factories, and both are specially suitable for long run work. One is a completely automatic double scoring machine, with a simple form of pile feed, the board being brought to the machine on a convenient truck, which also forms an element of the feeding gear. The second machine is a cutting and creasing press for folding box work, which automatically strips each sheet from the dies and ejects it under the machine. As the sheet need only be fed, an increase of output is claimed.

VICTORY-KIDDER PRINTING MACHINE CO., LTD., Victory Works, Birkenhead.

One Two-Colour Roll Product Press.

One " U " Type Slitting and Re-reeling Machine.

One Kidder Self-Feed Bed and Platen Printing Press.

The two-colour roll product press is of the vertical type, and is designed to print in one or two colours at will. The machine is also provided with two re-winding spindles and slitting mechanism, so that when required the mill roll may be slit into sections and re-wound independently. The machine is particularly easy of access for make-ready purposes, and the ink distribution is capable of inking the heaviest of solids at a high speed. The speed and flow of the web through the machine is controlled independently of the printing cylinders by geared web drag mechanism, which insures maintenance of perfect running register. This web drag mechanism, together with the printing impressions, are controlled by one quick throw-off device, so that all impressions and web-drag can be thrown off simultaneously to facilitate the threading of the web.

The " U " Type Slitting and Re-reeling Machine possesses many unique features, one of the most important being facilities for either slitting by means of shear or pressure cutters. The controls effecting mill roll brake side lay and re-winding tension, together with strike mechanism, are all situated in close proximity to each other, and within the easiest distance from operator. Efficient means are provided for handling slack-sided or uneven reels, and every provision made to insure first-class slitting and re-winding on all qualities of paper at high speed.

The Kidder Self-Feed Bed and Platen Printing Press is constructed to print one or two colours to accurate register on one side of the paper web. The paper from the mill roll is fed through the press automatically by the feeding mechanism, which draws the paper over the platen and delivers it to the front of the machine, where the cross-cutting knife cuts the web into sheets. The paper passes through the machine intermittently, the printing impression being made whilst the paper is stationary, and the feeding mechanism drawing the paper through the press after each impression. The mechanism operating the cross-cutting knife is arranged so that this knife can make either one, two or three cuts to each printing impression. The machine will take paper of a width up to a maximum of 20 in., and will feed and cut sheets in length from $3\frac{1}{2}$ in. up to 14 in. in even stages of $\frac{1}{8}$in. If required, the machine can be provided with attachment for perforating the web lengthwise, for perforating the web crosswise, for slitting the web into a number of strips, for scoring carton products, for punching, using upper and lower dies, or for re-winding the printed web. The various operations are fully automatic, and the machine is particularly suitable for the economical production of large quantities of a very diverse range of product.

THE WILLIAMS ENGINEERING CO., LTD., Nodis Works, Julien Road, Northfields, Ealing, S.W.

This firm is showing the well-known Nodis and Davis Typecasters, machines which, they claim, enable printers to cast their own type at a big reduction over typefounders' charges. The type is cast finished, ready for the case, in sizes from 6 up to 72-point, and samples of the product of these machines in various sizes are exhibited.

In conjunction with their machines, the Williams Co. have a very large number of matrices for casting most of the popular types in modern use. These matrices they lend to users of their machines for a small hiring charge, obviating the necessity for the printer to expend capital in the purchase of matrices.

Also on view: Specimens of Type Moulds, Matrices and other accessories manufactured by this firm, their Nickel Matrices in particular being made by a special process which they claim produces the best matrices on the market.

WITTON-JAMES, LTD., Manufacturing Engineers and Electric Power Specialists to the Printing Trade, Hendon, London, N.W.9, and Blackfriars House, London, E.C.4.

This firm is exhibiting a representative line of Plant and Switch Control Apparatus, the major portion of which will be " alive " and in actual operation. The exhibit comprises:—

A 40 h.p. D.C. Two-Motor Type Standard Variable Speed Rotary Web Press Driving Equipment, with Full Automatic Push Button Control.

Two 5 h.p. Equipments—one each for A.C. and D.C., for driving of small Jobbing and Bill Presses, each consisting of Variable Speed Motor, with motor-driven Automatic Controller and Push Button Boxes.

One 6 h.p. Semi-Automatic Equipment for Job Presses and similar drives, Matrix Mangle Driving Outfit, Safety Timing and Signalling Device for Rotary Web Presses.

Individual Unit Brakes for Rotary Web Presses.

Reel Hoist Driving Outfit, with underwind and overwind Limit Switches, etc.

Sundry Automatic Switch Control Apparatus for Alternate and Direct Current Circuits.

Standard Push Button Control System.
Individual Drive for Lino and Monotypes, etc.
A Magazine Roll Stand.

WYNNE & SELBY, LTD., 21, Grosvenor Place, London, S.W.1.

A complete range of Inks for the offset process, including a series for photo-offset and magazine offset printing, which should prove of great interest.

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No. 6 Vol. XXVII
JUNE - 1925

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ROTARY OFFSET MACHINE

With only THREE CYLINDERS, P.S.U. PILE DELIVERY, and INDEPENDENT DAMPING UNITS to EACH PLATE.

This machine prints in any of these ways :—

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If you visited the Agricultural Hall, London, during the Printing Trades Exhibition, and saw the Marinoni-Voirin Stands - We Know - you were impressed, We Feel - you were astonished at the range of machines there exhibited.

Such a demonstration is proof of vigorous and healthy manufacturing ability sustained by continuous success.

We invite you to share that success by the simple operation of installing our products on approval. You will thus discover that the production of beautiful printing is a simpler, and a more economical process than you have hitherto found it to be.

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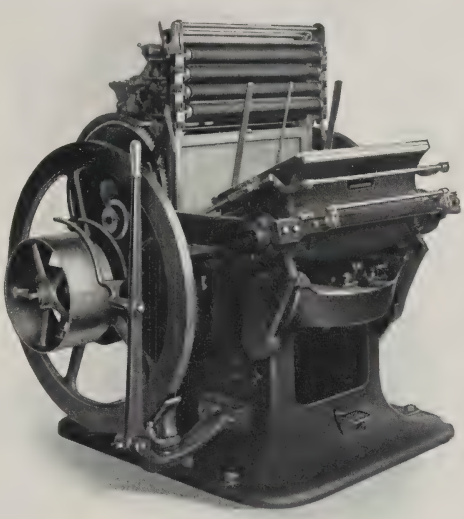

The "Laureate" Press

22 × 14 inside chase, double geared, two flywheels, four forme rollers, four distributors. This Press has no equal. It will ink and print at one impression, work impossible on any other platen.

The "Colt" Press

A high-class Press for all kinds of heavy work and light embossing. 14 × 22 inside chase. 1700 impressions per hour. Thousands in use.

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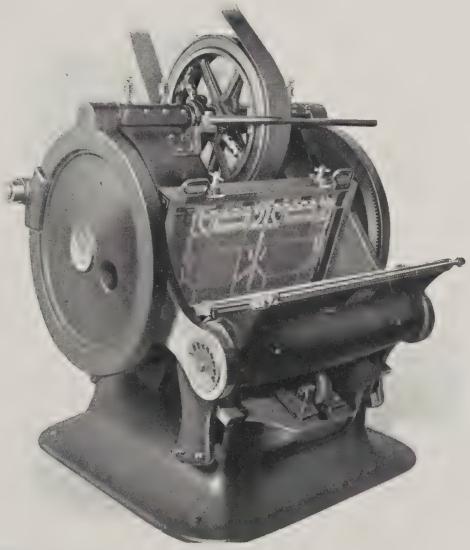
Cutting and Creasing Presses

Made in two Models—"Crank" Action (20 × 30 and 28 × 41) and "Eccentric" Action (26 × 38 and 28¾ × 39¾) inside chase. The most popular Presses in the Carton Box trade.



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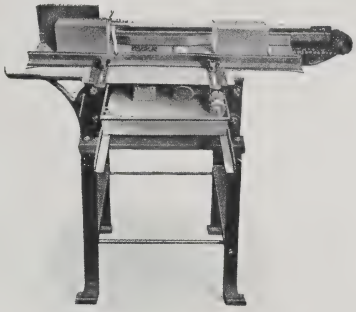

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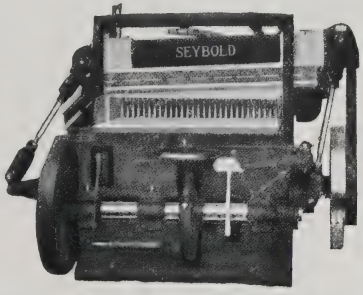
Gluing Back of Books, Magazines, Catalogues, etc.



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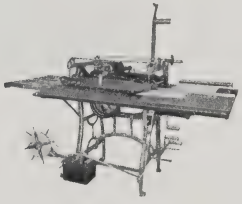

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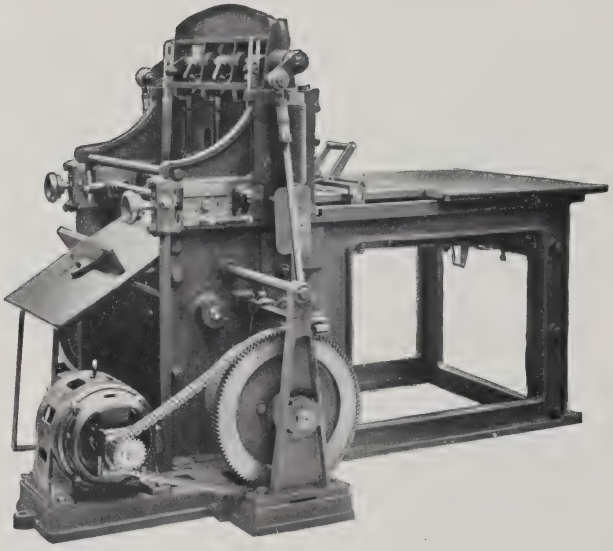

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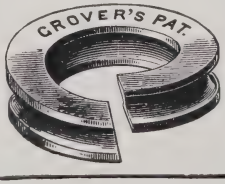

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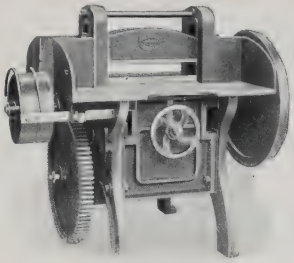

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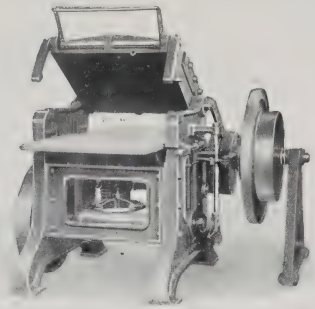

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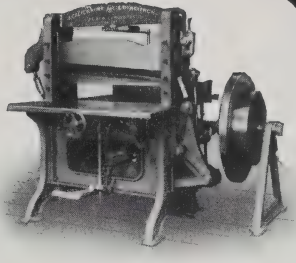

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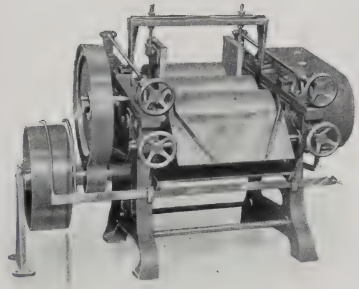

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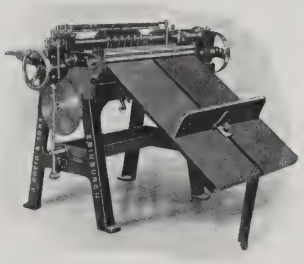

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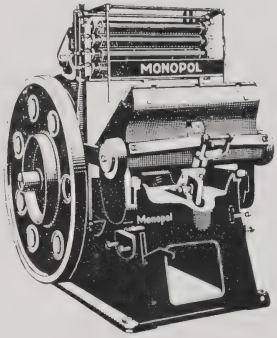

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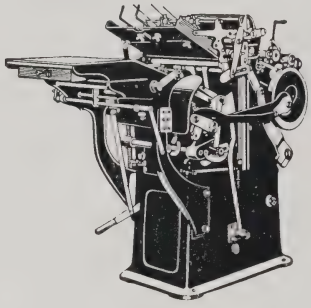

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Speed Range: 2,000-3,500 impressions per hour.

The impression is automatically thrown off in case of a misfeed.

The sheets are fed by hand to front gauges on a sloping feed board, in a similar way as on a cylinder machine.

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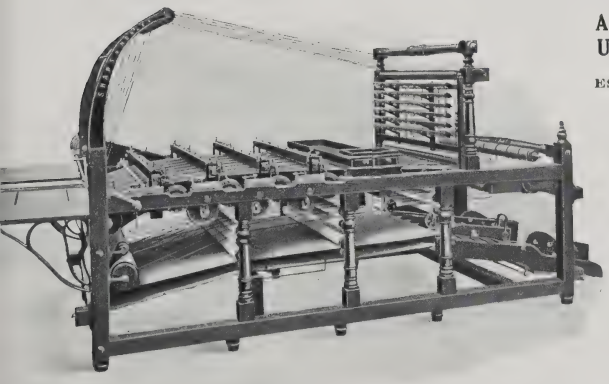

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Can be added to these Machines, also to existing Machines, for Ruling and Perforating at One Operation, for Straight Through and Striking.

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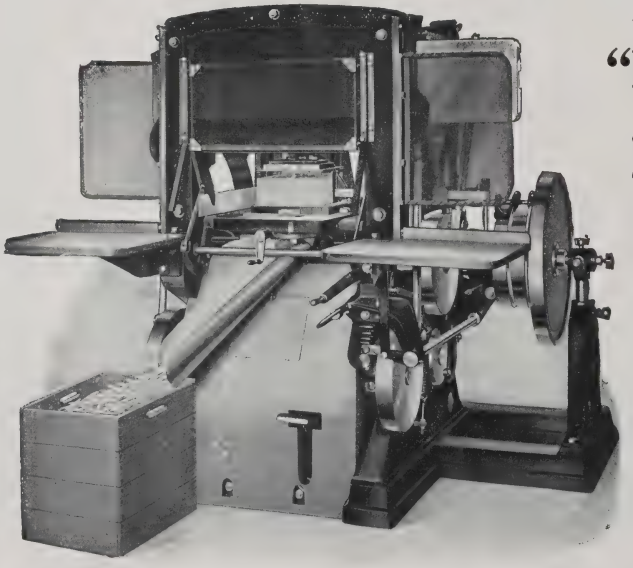

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is a Unique Preparation

for Lithographers which causes colours to dry rapidly into the paper without leaving a glazed surface.

S.M. *enables the next colour to be printed without any treatment or "dusting" of the sheets, as is usually necessary.*

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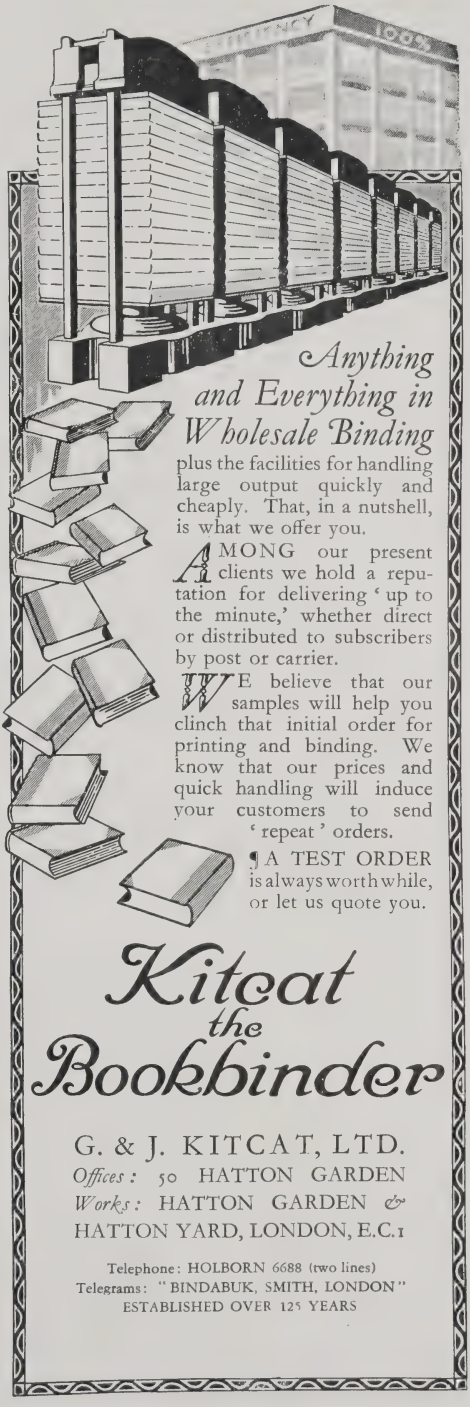

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ESTABLISHED AS TRADE PRINTERS IN 1898

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PREVENTS OFFSET

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ELIMINATES SLIP-SHEETING in Letterpress or Litho Printing

"Noffset"

Makes it possible to run presses at full speed.
Is efficient on both plain and multi-colour work, particularly on half-tone jobs.
Will not affect the rollers, discolour the ink, nor fill up the type. Prevents paper picking.
Permits full run of ink increasing the production of clean and neat presswork.

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IN ROLLS, BOOKS, PACKETS, or RAILWAY PATTERN,

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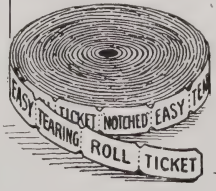
for EASY TEARING supplied to order.

A LIBERAL DISCOUNT to the Trade.

Any kind of Tickets supplied for issue by hand or Automatic Machines. Write for particulars or send sample for prices.



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MAKERS OF THE

Finest Printing Inks & Roller Composition

CONTRACTORS TO THE HOME AND VARIOUS COLONIAL AND FOREIGN GOVERNMENTS.

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are made for every conceivable printing process, from Poster and News to Litho, Offset, Multi-Colour, Photogravure, Collotype, Die Stamping, &c., &c. We can make these to suit YOUR special climatic or other special conditions.

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is so widely and favourably known, both at home and abroad, as to need no commendation. It is used in printing newspapers with mammoth circulations, necessitating long runs at the highest speed, and in producing the best illustrated work. **Nine out of ten London newspapers, and many provincial, are printed with our rollers.**

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Prompt and Courteous Attention—Always.

Your Enquiries are solicited. These should be sent to our Head Offices:

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of every description and in every form.

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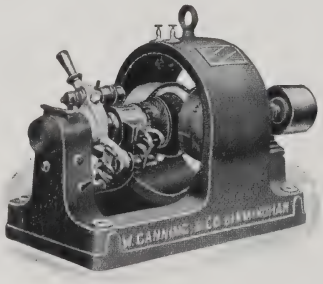

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APPLIANCES & CHEMICALS
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Also Complete Plant for Nickel-Facing Stereos and producing Copper and Nickel-steel Electros.

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Deliveries by return from stock to you, or under your own label direct to your customer, Carriage Paid, —— Packing Free, 5 per cent, one month. ——

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BIRMINGHAM	MANCHESTER	LEEDS	GLASGOW
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Millington & Sons, Ltd., THE "QUALITY" ENVELOPE MAKERS

Crown Works, - - - TOTTENHAM, LONDON, N.15

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ALL FAST TO LIGHT

In LETTERPRESS, LITHO. OR OFFSET.

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Works:
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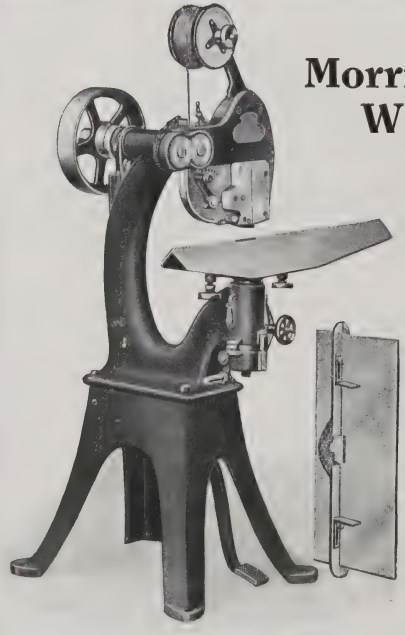

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Morrison "PERFECTION" Wire Stitching Machines

IMMEDIATE DELIVERY FROM STOCK.

Box Makers' Machines, made in three sizes, viz: 12in., 20in., and 30in. arm.

Printers' and Bookbinders' Machines, made in four sizes, to take from one sheet to 1½in. in thickness.

Illustration of ⅞in., capacity machine.

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Telegrams: "Perfection" Woodley. Telephone: 613 Stockport (3 lines).

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PROGRESS SERIES: No. 5.

Before the construction of the Assouan Dam the Nile lost by evaporation alone 1,000,000 *cubic yards of water in each twenty-four hours. This masterpiece of engineering is the product of Sir William Wilcox's fertile brain. The quantity of water retained in the dam is over one billion cubic yards, which roar with a thunderous noise through* 180 *enormous sluices to irrigate the agricultural lands of the Nile.*

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Back in '48 Benjamin Winstone opened a little workshop in Wine Office Court and started making printing inks. That was seventy-seven years ago, and by dint of hard work, service and fair dealing the little one-room laboratory of '48 now comprises two large modern factories.

Members of the craft pay tribute to this record of achievement by justly acknowledging the superiority and high quality standard of Winstone productions, which include Printing Inks, Rollers, Roller Composition, and time-and-cost-saving Sundries and Specialities (Litho and Letterpress).

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100-101, SHOE LANE, LONDON, E.C.4.

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3-7 Gunpowder Alley
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For
Trichromatic
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Let LANGLEY'S
HELP YOU!

SEND for Folder showing 30 other services for Printers, including Monotyping, Machining, Folding, Wire Stitching, Card Cutting, Edge Gumming, Holeing, Cording and Perforating.

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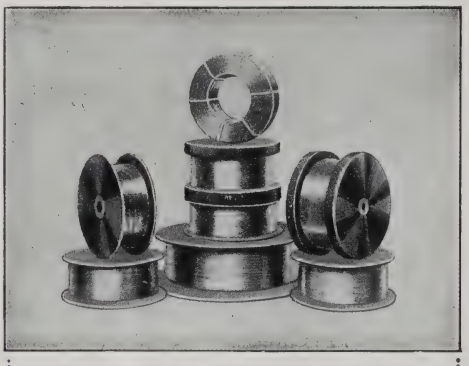
Loyal and Confidential Service for Printers.



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STAPLES
on Sticks or Boxed.

THE
"LIGHTNING" Paper Clips

CARD CONTRACTORS, TICKETS, HOOKS, CALENDARS, SUSPENDERS EYELETS

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Paragon Wire Works,
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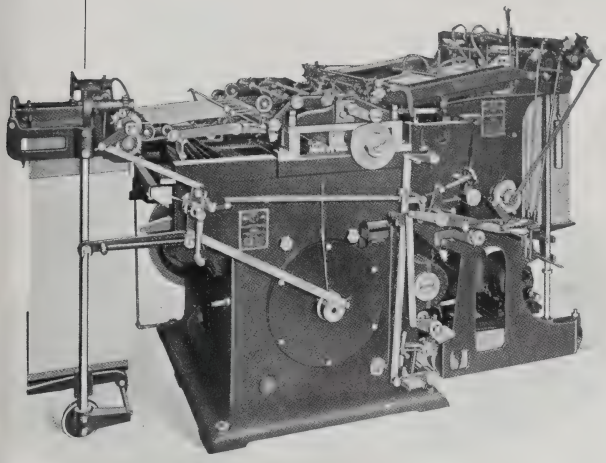
WORK DELIVERED ON TIME AND QUALITY ASSURED by Installing



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Built with
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GUARANTEED SPEED
4,000 PER HOUR.

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ESTABLISHED 1806.

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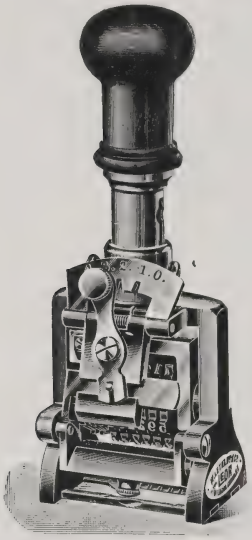
MADE IN ENGLAND.
Hand Cut Hardened Steel Wheels.



FIVE ACTIONS.
Price from £4 : 10 : 0

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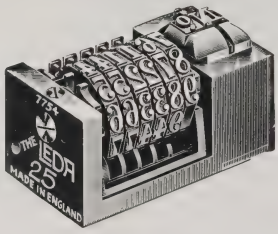
Low Plunger, Type High Numbering Machine.



Hard Steel Wheels.
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A LOW PLUNGER prevents damaged rollers and ensures perfect inking of all figures

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THE CHEAPEST RELIABLE MACHINE.

THREE ACTIONS.
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The Cheapest Four Action Machine.

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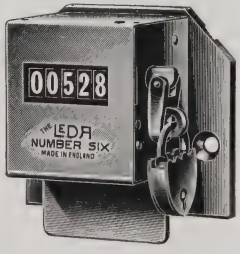

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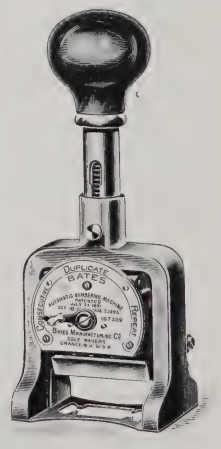
Price 60/-

NOTE REDUCED PRICES.

SEND FOR FULL DETAILED LIST.

The Original BATES

THREE ACTIONS.



Price from £3 : 10 : 0

W. LETHABY & CO., *Manufacturers*,

Phone—Clerkenwell 6641.

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N.B.—Buses from Bank pass French Place.

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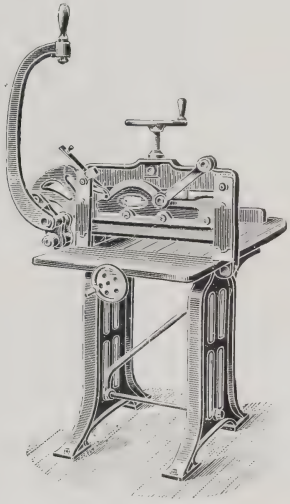
MODEL No. 24. **To Cut 24 inches.**

QUICK AND EASY ACTION,
FOR HAND POWER ONLY.



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Powerful lever arm and diagonal action. Knife secured when not in use by safety catch. Equipped with Back gauge and scale, and Hand clamping to work.
Rear Table allows cutting of Sheets 24″×24″. Simple adjustment of Knife after regrinding.
All parts accurately machined from best materials.

IMMEDIATE DELIVERY from STOCK at KEEN PRICES

Each machine complete with cutting stick and TWO KNIVES—machines can be inspected.

Visit our Showrooms—
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DURABILITY, however, is only one of their virtues, although it is important for reasons of economy. Another of their virtues is their excellent inking power brought about by the fine quality of the materials used and the special treatment they receive. The result is that there are no better rollers.

Rollers for re-casting should be sent to the works, 419, Old Ford Road, London, E.3, packed in boxes suitable for their return. Don't trouble to strip them.

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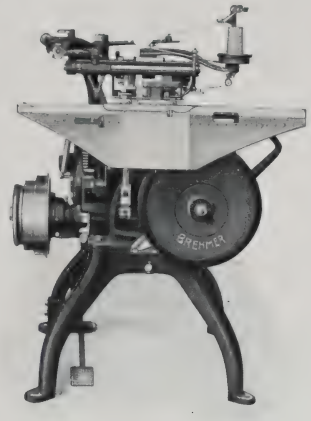

BREHMER No. 37
Thread Stitching Machine

GEBRUDER

BREHMER

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Can supply all Types of Machinery Suitable for The Printer and Binder, i.e.

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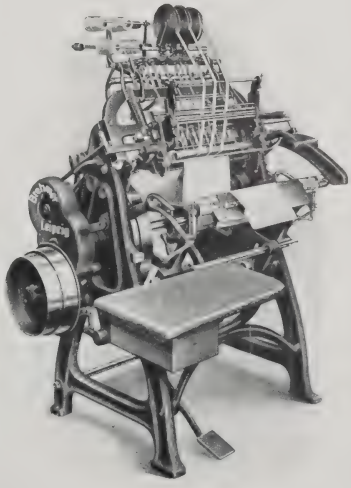
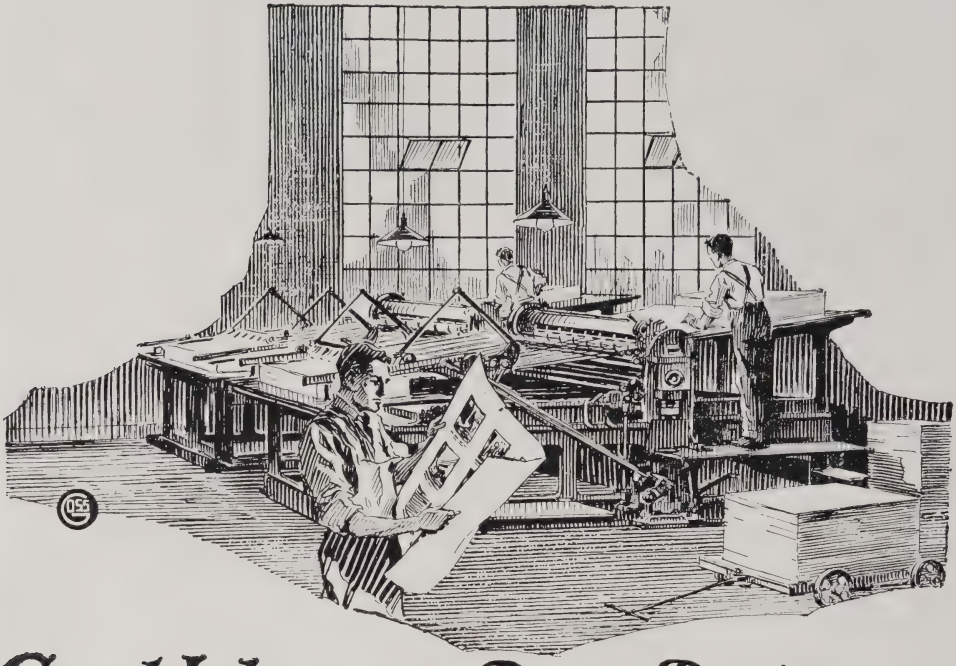
All Machines guaranteed.

Large Stocks of Original Brehmer Spares always carried at the above address.



BREHMER No. 38½
Thread Sewing Machine



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L & B Inks are made to *help* production.

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L & B Inks are made for every process for which printing inks are required.

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Model 93

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BORDERS and **RULES** of every description

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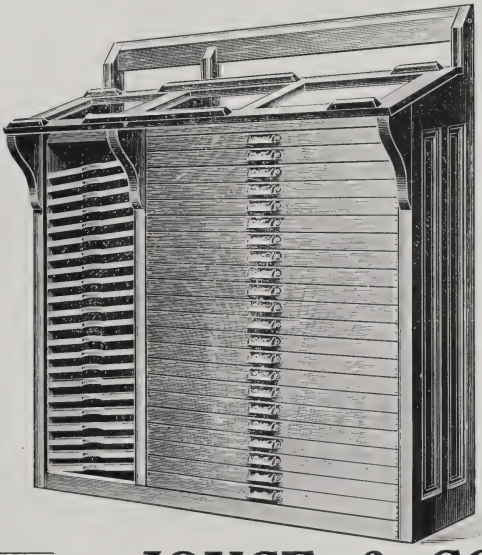

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Specification of Model 93

Dustproof Cabinet-Frame, fitted with Steel Runners for 22 Cases, and Galley Rack at side with straight or sloping shelves (as required) for 22 Jobbing Galleys.

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Valuations executed during the last three years

Average over £7,000,000 per annum.

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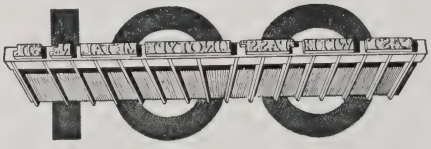

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Meco-Indestructible Envelopes.

Bursting Strain 163-lbs.
Four Times as Strong as Ordinary Cloth Lined.

Suitable *for* Sample Bags,
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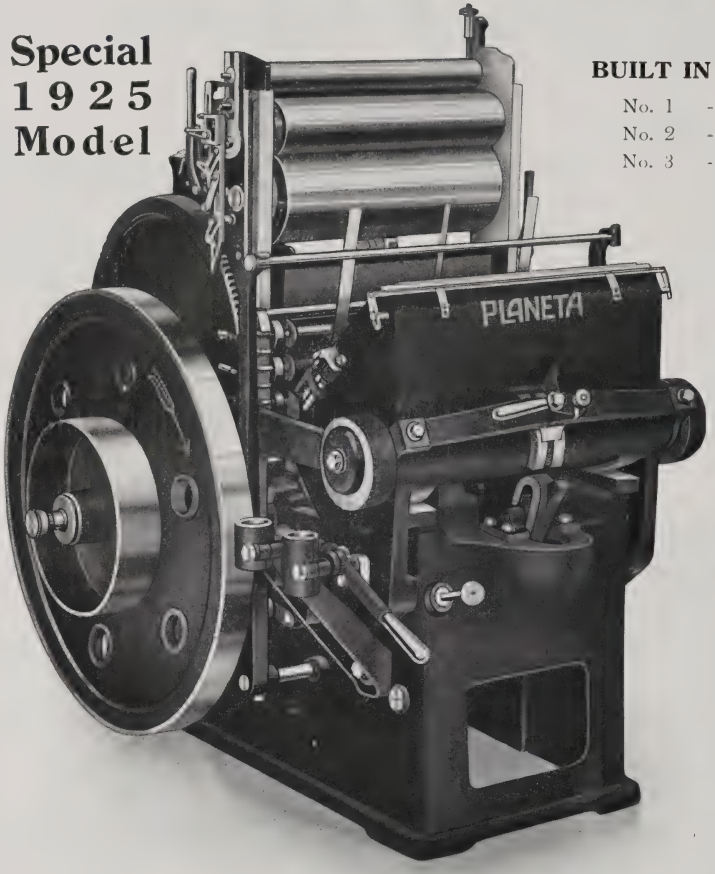
Special 1925 Model



BUILT IN THREE SIZES

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No. 1 has THREE Forme Rollers and Nos. 2 and 3 FOUR Forme Rollers.
Nos. 2 and 3 have Double Inking.

Make a point of calling at our Showrooms to view one of these New Models.
You will be agreeably interested.

A New Model Platen Press which will produce the very best Heavy Tint and Register Colour Work at a High Speed.

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As compared with the old Pasted Flong: The Mould can be produced in less than HALF the TIME and BETTER RESULTS are obtainable with LESS LABOUR, NO BEATING and NO MANGLE is used.

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that can very quickly be manufactured into Envelopes. Nothing but pure GUM ARABIC is used on the Sealing Flaps.

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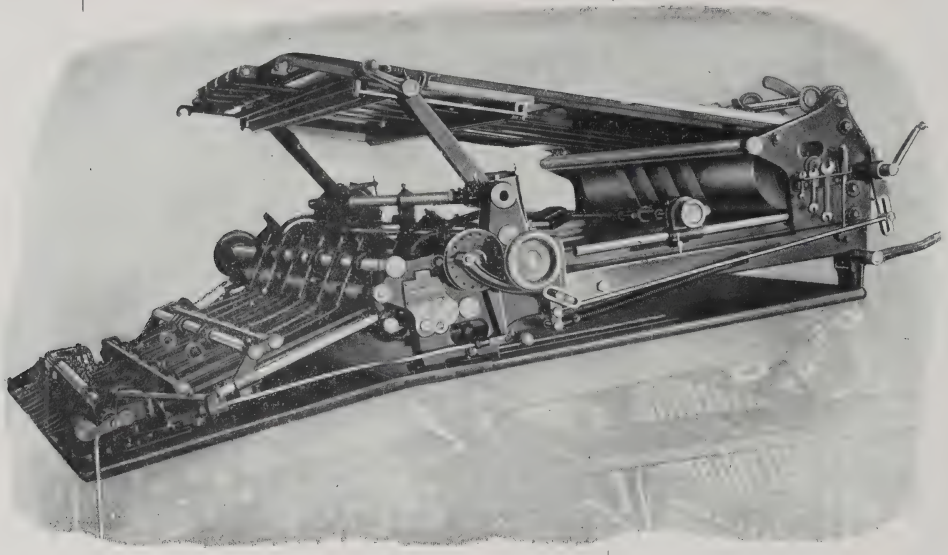

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AND THE MANUFACTURE OF ELECTRIC MOTORS AND THEIR APPLICATION TO PRINTING MACHINES IS OUR SPECIALITY.

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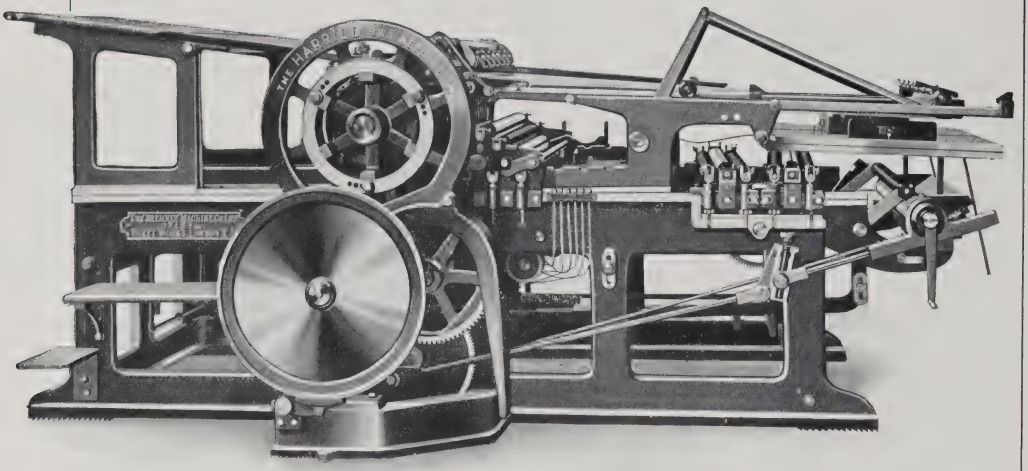
1809—1925

ROLLERS and COMPOSITION

The "Harrild" Two-Revolution



The Latest High Class Four-Roller Two-Revolution Press. Inking arrangements, impression, and sheet delivery are so designed that maximum production is assured on finest classes of work.

Size : DOUBLE ROYAL. Standard size sheet 25" × 40"
Bed Measurement 45" × 37" Will take sheet 30" × 40"

For speed, durability and excellence of design this machine is unrivalled.

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COLONIAL PRINTERS CAN GET FULL DETAILS OF OUR MACHINERY FROM OUR

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We attain the "Fryotype" Standard of Quality by meticulous attention to every detail during manufacture; by providing the most up-to-date technical equipment and expert knowledge; by the absence of every particle of deleterious impurity from our metals.

The RESULTS *of using "Metal of Quality" are:*

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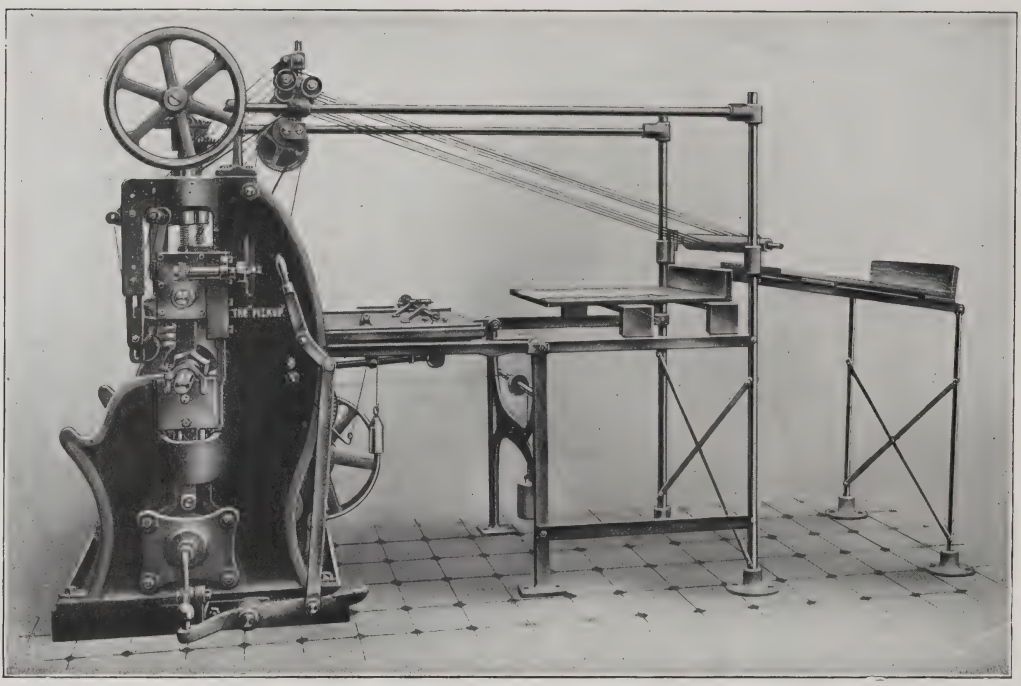
WILL PRINT WITH CYLINDERS OF VARIABLE SIZE.
PERFECT REGISTER. CAN BE ADAPTED TO PRINT FROM THE WEB.



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Lines the Printer always uses.

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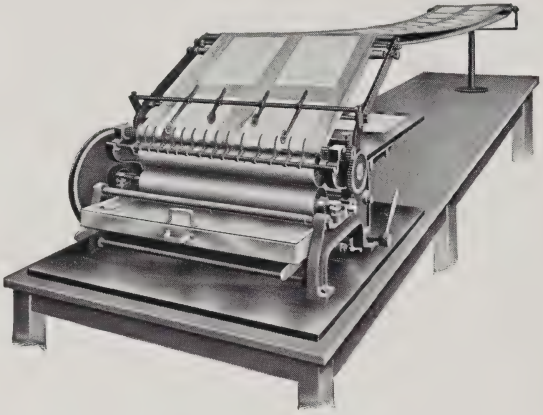

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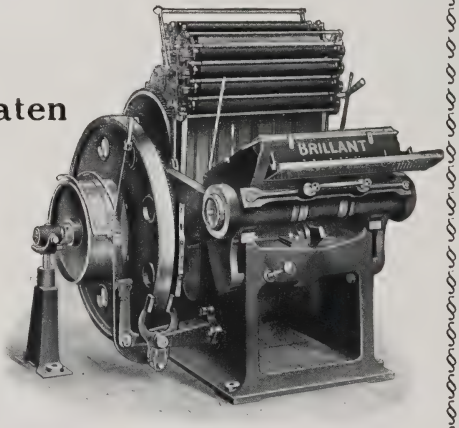

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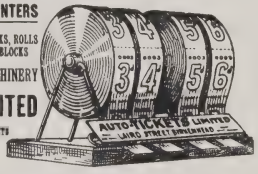

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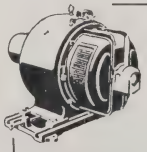

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